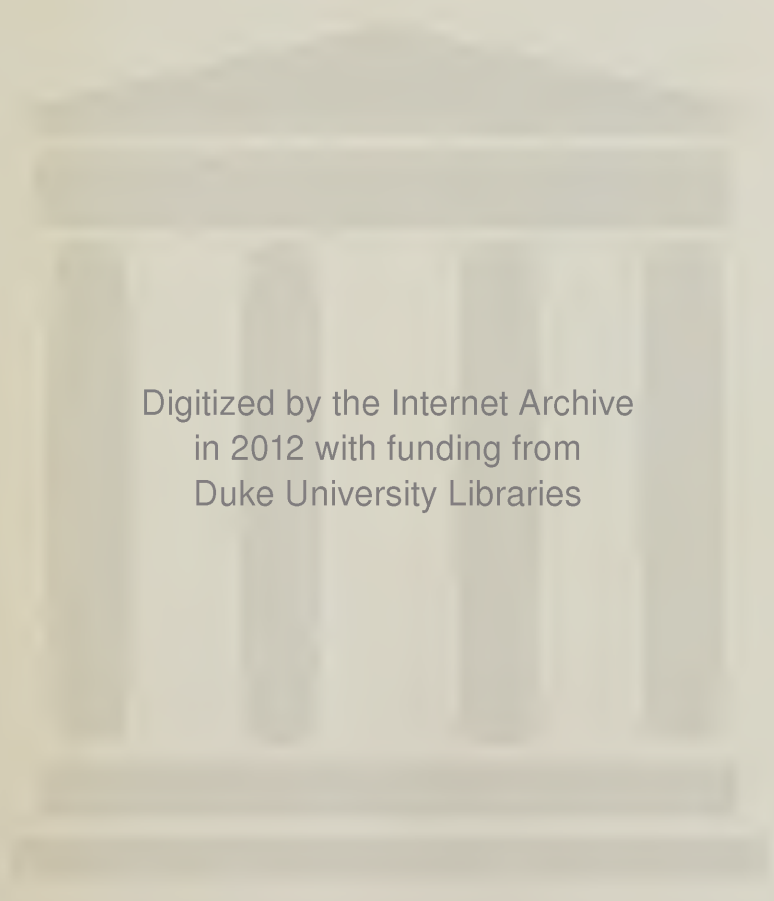


DUKE
UNIVERSITY



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BULLETIN OF DUKE UNIVERSITY



The School of Medicine

ANNOUNCEMENTS FOR 1953-1954

VOLUME 26

November, 1953

NUMBER 2

Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

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For BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

For BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

For BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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BULLETIN
OF
DUKE UNIVERSITY
THE SCHOOL OF MEDICINE



1953

ANNOUNCEMENTS FOR 1953-1954

DURHAM, NORTH CAROLINA
1953

Officers of Administration



ARTHUR HOLLIS EDENS, B.Ph., A.M., M.P.A., Ph.D., LL.D. <i>President of the University</i>	West Campus
WILLIAM HANE WANNAMAKER, A.B., AM., Litt.D. <i>Vice-Chancellor of the University</i>	West Campus
PAUL MAGNUS GROSS, B.S., A.M., Ph.D. <i>Vice-President in the Division of Education</i>	Hope Valley
CHARLES EDWARD JORDAN, A.B., LL.D. <i>Vice-President in the Division of Public Relations and Secretary of the University</i>	813 Vickers Avenue
HERBERT JAMES HERRING, A.B., A.M., LL.D. <i>Vice-President in the Division of Student Life and Dean of Trinity College</i>	Myrtle Drive
ALFRED SMITH BROWER, A.B. <i>Business Manager and Comptroller</i>	614 West Campus
CHARLES BLACKWELL MARKHAM, A.B., A.M. <i>Treasurer of the University</i>	204 Dillard Street

Committee on Health Affairs

- W. C. DAVISON, *James B. Duke Professor of Pediatrics and Dean of the School of Medicine.*
- FLORENCE K. WILSON, *Professor of Nursing Education, and Dean of the School of Nursing.*
- *ROSS PORTER, *Professor of Hospital Administration and Superintendent of Duke Hospital.*
- LELIA R. CLARK, *Professor of Nursing Service.*
- ANN JACOBANSKY, *Assistant Professor of Nursing in Charge of Nursing Education.*
- EWALD W. BUSSE, *Professor of Psychiatry.*
- BAYARD CARTER, *Professor of Obstetrics and Gynecology.*
- W. D. FORBUS, *Professor of Pathology.*
- F. G. HALL, *Professor of Physiology.*
- PHILIP HANDLER, *Professor of Biochemistry.*
- DERYL HART, *Professor of Surgery.*
- J. E. MARKEE, *James B. Duke Professor of Anatomy.*
- K. E. PENROD, *Associate Professor of Physiology and Pharmacology and Assistant Dean.*
- R. J. REEVES, *Professor of Radiology.*
- D. T. SMITH, *Professor of Bacteriology.*
- E. A. STEAD, JR., *Florence McAlister Professor of Medicine.*
- Four other members of the faculty holding the rank of Assistant Professor or above, by alphabetical rotation.

* On leave.

Foreword



This bulletin is issued for prospective medical students. Admission into any class is made only on the understanding that every decision of the Committee on Health Affairs shall apply to all students, even though it is made subsequently to their enrollment in the School. At frequent intervals the Committee on Health Affairs reviews the records of all students, and those whose progress has been unsatisfactory may be required to leave the School. Only those will be advanced who, in the opinion of the Committee on Health Affairs, give promise of being a credit to themselves and to the School. The next first-year class will be admitted October 4, 1954. For admission requirements and applications, see page 13.

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School of Medicine Calendar

1954-1955



1954

Jan.	4	Monday—Registration of students, and Winter Quarter begins.
Feb.	6	Saturday—First half of the year for first-year students ends.
Feb.	8	Monday—Second half of the year for first-year students begins.
March	20	Saturday—Winter Quarter ends.
March	29	Monday—Registration of students, and Spring Quarter begins.
April	10	Saturday—Spring vacation for first-year students begins.
April	19	Monday—Easter Monday: a holiday.
April	19	Monday—Spring vacation ends for first-year students.
June	7	Monday—Commencement Exercises.
June	12	Saturday—Spring Quarter ends.
July	4	Sunday—Independence Day.
July	5	Monday—a holiday.
July	6	Tuesday—Registration of students, and Summer Quarter begins.
Sept.	6	Monday—Labor Day: a holiday.
Sept.	18	Saturday—Summer Quarter ends.
Oct.	4	Monday—Registration of students, and Autumn Quarter begins.
Nov.	25	Thursday—Thanksgiving: a holiday.
Dec.	11	Friday—Founder's Day.
Dec.	18	Saturday—Autumn Quarter ends.

1955

Jan.	3	Monday—Registration of students, and Winter Quarter begins.
Feb.	5	Saturday—First half of the year for first-year students ends.
Feb.	7	Monday—Second half of the year for first-year students begins.
Mar.	19	Saturday—Winter Quarter ends.
Mar.	28	Monday—Registration of students, and Spring Quarter begins.
April	9	Saturday—Spring vacation for first-year students begins.
April	11	Monday—Easter Monday: a holiday.
April	17	Sunday—Spring vacation for first-year students ends.
June	6	Monday—Commencement Exercises.
June	11	Saturday—Spring Quarter ends.
July	4	Monday—Independence Day: a holiday.
July	5	Tuesday—Registration of students, and Summer Quarter begins.
Sept.	5	Monday—Labor Day: a holiday.
Sept.	17	Saturday—Summer Quarter ends.
Oct.	3	Monday—Registration of students, and Autumn Quarter begins.
Nov.	24	Thursday—Thanksgiving: a holiday.
Dec.	11	Sunday—Founder's Day.
Dec.	17	Saturday—Autumn Quarter ends.

General Statement



DUKE UNIVERSITY School of Medicine and Duke Hospital were established in 1930, through the munificent gift of the late James B. Duke. The School of Medicine has been planned to insure the greatest correlation between the various departments. These facilities are available also for students who are studying for degrees other than that of Doctor of Medicine. The School of Medicine has been approved as Class A by the American Medical Association and is also a member of the Association of the American Medical Colleges. On October 5, 1953, three hundred and sixteen students were enrolled.

Aims of the School

Duke University School of Medicine, from its beginning in 1930, has maintained as its major objectives: (a) the cultivation and teaching of medicine on a strictly scientific basis; (b) the correlation of medical research with medical teaching at all levels of its teaching, and (c) the continuous search for and experimentation with new or improved methods of teaching scientific medicine. In order to attain these objectives, the School has been organized, its physical plant planned, and its administrative structure constituted so that there exists the closest possible academic and physical relationship between undergraduate and graduate work in the University and the School of Medicine, and also between the basic medical sciences and the clinical sciences within the School and its integrated teaching Hospital. The professional staff of the School is composed of two general categories, those with permanent appointment and unlimited tenure, and those with temporary appointment. The latter, the much larger group, is maintained on a highly fluid basis, which makes possible a high degree of selectivity in appointment for academic training and scientific research. The smaller group of permanent appointees has in every individual a background characterized by academic and scientific attainment. The professional, academic, and scientific environment created by the staff is thus such as to engender scientific inquiry and to encourage diligent pursuit of the medical sciences in all their relationships. The staff at all levels devotes its entire professional time to the activities of the School or Hospital.

Facilities of the Hospital

Duke Hospital, an integral part of Duke University School of Medicine, has every modern convenience for the diagnosis, proper care, welfare and comfort of the patients, both ward and private, white and colored, whether they come from Durham or from a distance. It has 592 beds, including 30 bassinets for newborn infants, and 20 premature nursery bassinets. *Medicine*, including dermatology and neurology, has 77 ward beds; *surgery*, including urology, otolaryngology, ophthalmology, and orthopaedics, 135 ward beds; *obstetrics*, including gynecology, 59, and 50 bassinets; *psychiatry*, 5; and *pediatrics*, 40. There are 209 private rooms and semiprivate cubicles, 12 air-conditioned operating rooms, 4 obstetric delivery rooms, and ward and student laboratories. Offices and examining rooms for members of the Medical Faculty are located in the Hospital. The Hospital has been approved for internships and residencies by the Council on Medical Education and Hospitals of the American Medical Association, and the American College of Surgeons.

Duke Hospital and its Out-Patient Clinic were opened for patients on July 21, 1930. Through December 31, 1952, 455,235 individuals have been examined, diagnosed and treated. The average daily census of hospital patients during the past year was 458; 159,279 visits were made to the Out-Patient Clinics during the same period. Twenty-one per cent of the patients come from within a radius of twenty miles, the remaining 79 per cent come from the other 99 counties in North Carolina and from 36 other states and 3 foreign countries. The average distance traveled by the patients is more than seventy miles.

The Private Diagnostic Clinic was organized to co-ordinate the diagnostic studies, and to give better care to the complicated problems arising in the examination of private patients. The Clinical Staff of Duke Hospital and School of Medicine forms the professional staff of this clinic, while the financial side is handled by a business manager. The offices and examining rooms are in Duke Hospital, and all of the laboratory and diagnostic facilities of the Hospital and School of Medicine are utilized by the Clinic.

Library

JUDITH FARRAR, A.B. B.S., *Librarian and Assistant Professor of Medical Literature.*

MILDRED PERKINS FARRAR, A.B., *Assistant Librarian.*

"To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."—SIR WILLIAM OSLER.

In addition to the General Library of Duke University and the departmental libraries of biology, chemistry, physics, etc., which have 1,130,000 volumes available for medical students, Duke Hospital Li-

brary contains 54,216 volumes of American and foreign medical literature and subscribes to 675 current American and foreign medical and other scientific journals. These books and journals are available daily from 8:30 A.M. to 10:30 P.M. for the students, nurses, staff, and medical profession.

Medical Care

ELBERT L. PERSONS, A.B., M.D., *Physician in Charge and Associate Professor of Medicine.*

With exceptions noted below, full medical and surgical care is furnished to all regularly matriculated medical students of the University who have paid the quarterly General Fee. This service is under the direction of the Physician in Charge with the co-operation of the Staff of Duke Hospital. It includes hospitalization (limited to thirty days), medical and surgical care, drugs, dressings, x-ray studies, and ward but not special nursing. A charge for board is made at the same rate as in the University dining halls. Refraction of eyes and treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernia, elective surgery, chronic skin conditions, endocrine disturbances, etc., or accidents or illnesses occurring during vacations or while off the campus are not included in this service. The cost of any necessary braces and orthopaedic appliances, as well as of special nursing must be borne by the patient. If the student has insurance providing hospitalization, surgical, or medical benefits, the benefits shall be applied to the cost of his medical care.

Student Government

The members of the student body elect an Honor Council, in which each class is represented. It is the duty of the Honor Council to hear all cases involving breaches of conduct on the part of members of the student body. All new students entering the School are required to comply with this system of government. The Council for 1953-54 is as follows: Chairman: J. M. Kelley, Jr.; Secy.-Treas.: J. D. Jones; Fourth Year Class: A. Thomas Craddock, J. E. Clement and M. S. Spach; Third Year Class: R. G. Deyton, Jr., D. E. Saunders, Jr., and P. C. Bennett, Jr.; Second Year Class: J. M. Sloan, III, J. H. Pollock and A. E. Deiss, Jr.; First Year Class: To be elected.

Curriculum of the School of Medicine



THERE is no summer quarter between the first and second years, but in the two clinical years the subjects of the autumn, winter and spring terms are repeated in the summer quarter. This accelerated schedule is optional, and students may take their first year, and three quarters in each of their subsequent years, and receive their certificates in four calendar years, or, if they receive permission from the Curriculum Committee, they may at the end of their second year take the clinical quarters given during the summers and receive their certificates in three and one quarter calendar years.

Every effort is made to emphasize the close relationship of pre-clinical and clinical instruction. Members of the clinical staff assist in the teaching of preclinical subjects and demonstrate to the students of the first two years patients whose conditions illustrate the subjects being taught. Thus, from the student's first days, he is impressed with the interdependence of all branches of medical science. In the junior and senior years, preclinical instructors assist the clinical staff in presenting the underlying basis of disease.

The free time in this curriculum may be spent in elective work or anything else the students wishes to do. No credits are given, but opportunity is provided for each student on his own initiative to obtain additional training which he may feel to be necessary or desirable. Elective courses have been organized for small groups, or the time may be utilized in independent work (including research) in any department, clinical or preclinical. Arrangements for taking such courses or doing other work are to be made through the Curriculum Committee.

It is hoped that many students will migrate to other medical schools for one or more quarters. Those who wish to do so, or to substitute a schedule different from that listed below, must have their programs approved in advance by the Curriculum Committee, and afterwards must present evidence that they have completed work comparable to that of the curriculum during the quarters in which they were away or were following an altered schedule.

OPTIONAL ACCELERATED SCHEDULE*

(The hours for these courses will be posted on the bulletin board.)

FIRST YEAR

29 September 1952 to 7 February 1953.	
Anatomy (including histology and neuroanatomy)	617
Orientation	5
Psychobiology	16
Free Time	6
9 February to 13 June 1953.	
Physiology	341
Biochemistry	279
Psychobiology	12
Free time	11

SECOND YEAR

AUTUMN QUARTER (4th):	
5 October to 19 December 1953.	
Pharmacology	143
Bacteriology	176
Parasitology	44
Public Health and Biostatistics	66
WINTER QUARTER (5th):	
4 January to 20 March 1954.	
Pathology	231
Public Health	66
Introduction to Medicine and Surgery	132
SPRING QUARTER (6th):	
29 March to 12 June 1954.	
Pathology	223
Introduction to Medicine	111
Clinical Microscopy	95

JUNIOR YEAR

SUMMER QUARTER (7th):*	
6 July to 18 September 1954.	
Medicine (Junior)	429
AUTUMN QUARTER (8th):*	
4 October to 18 December 1954.	
Surgery (Junior)	429
WINTER QUARTER (9th):*	
3 January to 19 March 1955.	
Obstetrics and Gynecology (Junior)	352
Psychiatry	77

SENIOR YEAR

SPRING QUARTER (10th):*	
28 March to 11 June 1955.	
Medicine (Senior)	390
Free time	39
SUMMER QUARTER (11th):*	
5 July to 17 September 1955.	
Surgery (Senior) including urology and orthopaedics	390
Electives	39
AUTUMN QUARTER (12th):*	
3 October to 17 December 1955.	
Pediatrics	297

* The clinical instruction is repeated each quarter in order to utilize all the clinical material and to have small groups of students. Consequently, students may vary the order of the seventh, eighth, and ninth quarters, and also the order of the tenth, eleventh, and twelfth quarters. The above schedule merely illustrates the program of one group.

Surgery	41
Psychiatry	41
Preventive Medicine	11
Electives	39

SUMMARY

Total number of hours in curriculum	5,148
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MEDICAL HUMANITIES

The Course is given for one hour per week as an elective. The historical aspect of medicine as well as the ancillary medical disciplines are included in the series of lectures. Members of the various university departments as well as members of the legal profession and social agencies of the community participate in this program which is under the direction of George J. D'Angelo, M.D. Such a program is designed to give to the student some knowledge of the history of his profession and also to prepare him for the practice of medicine. The following general topics are presented:

<i>First Year:</i>	Society and the Physician History of the Basic Sciences
<i>Second Year:</i>	History of the Basic Sciences Religion and the Physician Hospital and the Physician
<i>Third Year:</i>	History of Medicine Hospital and the Physician Social Agencies in Medicine Medical Jurisprudence
<i>Fourth Year:</i>	History of Medicine Ancillary Social Agencies Medical Jurisprudence Medical Ethics and Economics

Requirements for the Degree of Bachelor of Science in Medicine

After the completion of six quarters in the Duke University School of Medicine, Duke University, on the recommendation of the Committee on Health Affairs grants the degree of Bachelor of Science in Medicine to medical students who have completed creditable investigative work, prepared an acceptable report of the investigation, and passed an examination upon the subject of the investigation before an advisory committee. Students who elect to undertake work toward this degree must obtain written permission from the Committee on Health Affairs after approval of their program by the head of the department

in which the work is to be done. No credit toward this degree is given for additional college work. All students in good standing are encouraged to undertake such investigative work as they may elect with the approval of the head of the department in which they wish to work. All requirements must be completed three months prior to the date on which the B.S. degree is requested.

Requirements for the Degree of Doctor of Medicine

The degree of Doctor of Medicine is conferred on those who have completed, to the satisfaction of the Committee on Health Affairs, the twelve quarters of 11-12 weeks each of the curriculum of the School of Medicine, the preclinical and clinical examinations, and have signed an agreement that they will spend at least two years of the succeeding three years in hospital or laboratory work acceptable to the Committee on Health Affairs. As a guarantee of this pledge the diploma is deposited in the Treasurer's Office until after the completion of this training. Failure to fulfill this agreement constitutes a waiver of any claim to possession of the diploma and the degree of Doctor of Medicine. At present, one half of the required period of approved hospital or laboratory training may be active duty in the Army, Navy or U. S. Public Health Service.

Admission



Application for Admission

APPLICATION forms may be obtained by writing to the Committee on Admission, Duke University School of Medicine, Durham, N. C. A check or post office money order for \$5, payable to Duke University School of Medicine, must accompany each request for an application. This is not refundable. If further information is required after the Committee has studied the completed application, a personal interview with the Committee on Admission or a Regional Representative is arranged for the applicant. The candidate then is notified as soon as possible whether he has been accepted or declined; if accepted, he must send a deposit of \$50 by a date which will be specified in the letter of acceptance but in no case prior to January 1 to insure enrollment. This money is applied toward the tuition. The next first-year class will be admitted October 4, 1954. Applications must be submitted prior to December 1 of the preceding year. Due to the large number of applicants to all medical schools, candidates are advised to apply to at least four schools. Special consideration will be given to the applications of those who may receive an acceptance from another school before hearing from their Duke application but who prefer to come to Duke. The number of students in each class is limited to 76, but only those students will be accepted who give promise of being a credit to the School and the medical profession. Women are received on the same terms as men. In the event of vacancies, students from other medical schools may be considered for admission to any quarter for which their previous training has fitted them. Each application for advanced standing will be considered upon its own merits.

Requirements for Admission

"I request that great care and discrimination be exercised in admitting as students only those whose previous record shows a character, determination and application evincing a wholesome and real ambition for life."—JAMES B. DUKE.

Intelligence and character are the essential qualifications for admission.

The minimum requirements for admission to this School include approved college credits of not less than ninety semester hours, which shall include adequate preparation in English, mathematics, physics,

biology, and chemistry. This preparation should be obtained in college courses of one-year duration, except in English and chemistry. In those subjects, two years are recommended. The second year in English should be chiefly composition and theme writing. The first year of chemistry should be general (inorganic), and the second, analytic and organic chemistry.

A premedical student should be aware of the importance of a well-rounded general education as a preparation for the study of medicine and not limit himself to scientific courses. He would be better advised to secure a knowledge of the principles and a thorough appreciation of the interrelations of the basic sciences than to accumulate credits in many courses. He should learn how to work independently, to observe critically, and to analyze, rather than simply store, the information presented. His choice of studies, beyond those required for admission, should be governed by his own chief interests and by the intellectual stimulus to be derived from the work. His major interest may be in any field, scientific or otherwise, and should provide an opportunity for the demonstration of his real ability. In general, he should avoid courses in subjects which are included in the medical curriculum.

The selection of students is based upon the quality rather than the quantity of preparation and upon demonstrated evidence of personal attributes of intelligence, character, and general fitness for the study and practice of medicine. In considering an applicant many sources of information may be consulted including (1) his curricular and extracurricular college record, (2) carefully prepared, confidential appraisals by teachers who know him personally, (3) his percentile rating on the Medical College Admission Test,* and (4) the results of an interview with members of the Admission Committee or one of its regional Representatives.

Regional Representatives of the Committee on Admission

Birmingham, Alabama.....	M. Y. DABNEY
Los Angeles, California.....	JEREMIAH W. KERNER
Pasadena, California.....	ROBERT H. PUDENZ
San Francisco, California.....	EMILE F. HOLMAN
San Francisco, California.....	CHARLES H. DANFORTH
Montreal, Canada.....	WILDER PENFIELD
Denver, Colorado.....	F. VERNON ALTVATER
New Haven, Connecticut.....	ALLEN K. POOLE
Jacksonville, Florida.....	EDWARD JELKS
Lakeland, Florida.....	CHARLES LARSEN, JR.
Atlanta, Georgia.....	JAMES E. PAULLIN
Atlanta, Georgia.....	E. B. DUNLAP, JR.
Savannah, Georgia.....	VICTOR H. BASSETT

* This test is given at many of the colleges during the spring and autumn terms. If information is not available locally, it may be obtained from the Educational Testing Service, P.O. Box 592, Princeton, N. J.

Chicago, Illinois.....	GEORGE H. GARDNER
Iowa City, Iowa.....	ARTHUR L. BENTON
Iowa City, Iowa.....	PHILIP C. JEANS
Kansas City, Kansas.....	RALPH H. MAJOR
Wichita, Kansas.....	THOMAS JAGER
Louisville, Kentucky.....	MALCOLM D. THOMPSON
Louisville, Kentucky.....	S. I. KORSHAUSER
New Orleans, Louisiana.....	PHILIP H. JONES, JR.
Baltimore, Maryland.....	CHARLES E. LEACH
Baltimore, Maryland.....	JOHN T. KING, JR.
Boston, Massachusetts.....	JAMES H. CURRENS
Port Huron, Michigan.....	WILLIAM T. DAVISON
Rochester, Minnesota.....	W. H. HOLLINSHEAD
St. Louis, Missouri.....	DORIS SURLS WOOLSFY
Butte, Montana.....	CAROLINE MCGILL
New York, New York.....	LAWRENCE S. KUBIE
New York, New York.....	BERTRAM J. SANGER
Rochester, New York.....	WILLIAM S. MCCANN
Syracuse, New York.....	PHILIP P. ARMSTRONG
Cleveland, Ohio.....	B. S. KLINE
Columbus, Ohio.....	CHARLES A. DOAN
Dayton, Ohio.....	R. L. JOHNSTON
Toledo, Ohio.....	JOHN L. STIFEL
Oklahoma City, Oklahoma.....	WILLIAM M. TAYLOR
Tulsa, Oklahoma.....	JAMES W. KELLY
Portland, Oregon.....	KARL H. MARTZLOFF
Johnstown, Pennsylvania.....	W. FREDERIC MAYER
Palmerton, Pennsylvania.....	R. P. BATCHELOR
Pittsburgh, Pennsylvania.....	DAVENPORT HOOKER
Scranton, Pennsylvania.....	GEORGE A. CLARK
Providence, Rhode Island.....	MARSHALL N. FULTON
Charleston, South Carolina.....	EDWARD F. PARKER
Charleston, South Carolina.....	J. I. WARING
Columbia, South Carolina.....	BEN N. MILLER
Columbia, South Carolina.....	WILLIAM WESTON
Columbia, South Carolina.....	JAMES H. GIBBS
Greenville, South Carolina.....	RAYMOND C. RAMAGE
Chattanooga, Tennessee.....	RICHARD VAN FLETCHER
Memphis, Tennessee.....	RAPHAEL E. SEMMES
Nashville, Tennessee.....	SAM L. CLARK
Sewanee, Tennessee.....	HENRY T. KIRBY-SMITH
Dallas, Texas.....	A. JAMES GILL
Galveston, Texas.....	A. E. HANSEN
San Antonio, Texas.....	P. I. NIXON
Salt Lake City, Utah.....	THOMAS RAY BROADBENT
Charlottesville, Virginia.....	HENRY B. MULHOLLAND
Richmond, Virginia.....	I. A. BIGGER
Seattle, Washington.....	WILLIAM A. MACCOLL
Huntington, West Virginia.....	R. M. WYLIE
Madison, Wisconsin.....	WALTER E. SULLIVAN

Fees and Expenses



ALL FEES for each quarter are due and payable at the beginning of each quarter, and no student will be admitted to classes until these fees have been paid at the University Treasurer's Office. A fine of \$5.00 is charged for late registration. No credit will be given for any quarter in which the tuition has not been paid at the Treasurer's Office, whether the work has been done here or elsewhere, except that students who have been permitted by the Curriculum Committee to spend a quarter at another medical school or hospital may subtract the amount of tuition paid at this other medical school or hospital from that due here for that quarter.

It is not advisable for a student to attempt outside work to defray his expenses; the results usually are disastrous to his health and academic standing.

Fees and Expenses

Tuition, per quarter	\$300	
General Fee, per quarter, including Health, Commencement, and Diploma Fees	7.50	
Athletic Fee, not including Federal tax, optional, per year, payable in the autumn quarter	10.00	
Room-rent, per quarter* (estimated)	58.50	
Board, per quarter (estimated)	120	to 130
Laundry, per quarter (estimated)	10	to 20
Books, per quarter (estimated)	25	to 50
National Board of Medical Examiners, Fees† \$25 (Part I), \$20 (Part II)		
Microscope, ophthalmoscope, otoscope, and other equipment, which are required of each student and which must conform to rigid standards, may be obtained on a rental basis from the University, per quarter	45	to 65
Estimated total expenses, per month (including tuition)	190	to 250

* Information and the regulations about rooms in the Men's Graduate Center and Epworth Hall on the Woman's College Campus can be obtained by writing to the Duke University Housing Bureau, Durham, N. C. All dormitory rooms are occupied under the rules and regulations established by the University. Residence in University dormitories is not required. Rooms may be reserved by new applicants only if they have been accepted officially for admission to the University and if they have paid a room deposit of \$25 to the Duke University Housing Bureau. The initial room reservation deposit is effective for the period of continuous attendance. It will be refunded within 30 days after the student's graduation. Upon the withdrawal of an accepted applicant or of an enrolled student prior to graduation the deposit is refundable provided the Housing Bureau is notified at least 60 days prior to the beginning of the term for which the room is reserved. Students already in residence may retain their rooms for the succeeding quarter by applying to the Duke University Housing Bureau for confirmation of the reservation.

† Payable at the beginning of the quarter in which a student is eligible for the examination.

Angier B. Duke Memorial and Other Loan Funds

The Angier B. Duke Memorial, Incorporated, administers through an advisory committee of the officers of the University a loan fund for students. In addition, the loan fund of the W. K. Kellogg Foundation and the Pfizer Scholarship Fund are available for students who are not financially able to meet their expenses. Medical students, after their third quarter, may apply for loans from these sources. No University scholarships are awarded in the School of Medicine. The loan funds are administered in accordance with the following regulations:

1. No loan will be made to a student who violates any of the regulations of the University or who is not doing outstanding classwork.
2. Loans will be made only to students who are taking full courses of study that lead to a degree, and all loans must be arranged not later than one week after the beginning of a quarter.
3. Every applicant for a loan must present with the application such security as the President of the University may approve, and no money will be advanced before a note with approved security is in the hands of the Treasurer of the University.

Frederic M. Hanes Fellowships

Any Duke medical student after his first year is eligible for a leave of absence and a Fellowship of \$150 per month for full-time research work at Duke with special emphasis in a preclinical subject. These Fellowships will be granted on the recommendation of the Committee on Health Affairs for a period of six months, but may be renewed. Information may be obtained from Dr. D. T. Smith.

Awards to Medical Students and Interns

(Additional information may be obtained from the Dean's Office.)

Borden Undergraduate Research Award in Medicine

An award of \$500 may be given to the Duke Senior who, in the opinion of the Committee on Health Affairs has performed the best research work during his or her entire medical course, including that done during the preclinical years, and thesis for the B.S. degree in Medicine. *Applicants should submit their papers, articles or reprints to the Dean at least three months prior to expected date of graduation.*

Trent Prize in the History of Medicine

An annual award of fifty dollars for the best original and publishable essay on any topic in the history of medicine or its allied sciences by a Duke medical student or house-officer has been established by Mrs. J. C. Trent in memory of the late Dr. Josiah C. Trent, who had been Assistant Professor of Surgery in Charge of Thoracic Surgery at Duke, and who had greatly increased the interest of the staff and students in medical history. Essays should be submitted to Dr. Joseph E. Markee, the Chairman of the Trent Award Committee, by April 1 of the year in which they are to be considered.

The J. C. Trent Medical History Society, open to all Duke medical students and house officers, meets the second Tuesday of each month, either for informal discussions among its members or for a guest lecture, to which the public is welcomed. The Society also sponsors the *J. C. Trent Memorial Lecture*, established by Mrs. Trent.

Bagby Award in Pediatrics

The best Duke Pediatric Intern is eligible for a subscription to the *American Journal of the Diseases of Children*.

Mosby Awards

A text or reference book from the C. V. Mosby catalog may be selected by each of the five best seniors.

Pfizer Award

The Charles Pfizer Company offers a \$1,000 Scholarship Fund available for one to three students on the basis of scholarship and need.

Merck Award

Merck and Company donates complimentary copies of *The Merck Manual* to two outstanding seniors.

Departments of Instruction



Anatomy

JOSEPH ELDRIDGE MARKEE, B.S., Ph.D., *James B. Duke Professor of Anatomy and Chairman of the Department.*

B.S. and Ph.D., Chicago, 1925 and 1929; Douglas Smith Fellow in Anat., 1929; Instr. in Anat., Chicago, 1929; Research Fell., Gen. Ed. Bd., Carnegie Lab. of Embry., Balto., 1935-1936; Visiting Prof. of Anat., Univ. of Tenn., 1942; Instr., Asst. Prof., Assoc. Prof. and Prof. of Anat., Stanford, 1929-1943; 1943—

DUNCAN CHARTERIS HETHERINGTON, A.B., M.A., Ph.D., M.D., *Professor of Anatomy.*

A.B., Colorado Coll., 1919; M.A. and Ph.D., Illinois, 1920 and 1922; M.D., Johns Hopkins, 1926; Instr. in Anat., Vanderbilt Med. Sch., 1926-1930; Associate Prof. of Anat., Duke, 1930-1945; 1930—

JOHN WENDELL EVERETT, A.B., Ph.D., *Professor of Anatomy.*

A.B., Olivet, 1928; Ph.D., Yale, 1932; Instr. in Biol., Goucher, 1930-1931; Asst. and Assoc. Prof. of Anat., Duke, 1932-1946; 1932—

TALMAGE LEE PEELE, A.B., M.D., *Associate Professor of Anatomy and Assistant Professor of Medicine.*

A.B., and M.D., Duke, 1929 and 1934; Asst. in Anat., Duke Med. Sch., 1931-1934; Int. and Asst. Res. in Med., Duke Hosp., 1934-1936; Int. and Res. in Neurol., Bellevue Hosp., New York City, 1936-1937; Fellow in Anat., John Hopkins Med. Sch., 1937-1938; Instr. in Anat., Rochester Med. Sch., 1938-1939; Visiting Asst. Prof. Neurol., Instit. Neurol., Northwestern Univ. Med. Sch., 1945; 1939—

ROLAND FREDERICK BECKER, B.S., M.S., Ph.D., *Associate Professor of Anatomy.*

B.S. and M.S., Mass. State Coll., 1935 and 1937; Ph.D. Northwestern Univ. Med. Sch., 1940; Research in Child Psychology, Univ. of Iowa, 1938-39; Research Asst. in Anat., Northwestern, 1940; Instr., Assoc. and Asst. Prof. in Anat., Northwestern, 1940-46; Asst. Prof. of Anat., Univ. of Wash. Med. Sch., 1946-47; Acting Head in Anat., Univ. of Wash. Med. Sch., 1947-48; Assoc. Prof. and Head of Neurological Div., The Daniel Bough Instit. of Anat., Jefferson Med. Coll., 1949-51; 1951—

KENNETH LINDSAY DUKE, A.B., Ph.D., *Associate Professor of Anatomy.*

A.B., Brigham Young, 1936; Ph.D., Duke, 1940; Grad. Asst. in Zool., Brigham Young Univ., 1936-1937; Grad. Asst. in Zool., 1937-1939, and Fellow in Zool., Duke, 1939-1940; Visiting Instr. in Anat., U. of Missouri, 1944; Visiting Asst. Prof. of Anat., U. of Tenn. Sch. of Med., 1949; Assoc. in Anat., and Asst. Prof., Duke, 1940-1946; 1940—

GEORGE JAY BAYLIN, A.B., M.D., *Professor of Radiology and Associate in Anatomy.*

JEROME A. GRUNT, Ph.D., *Instructor in Anatomy.*

JOHN B. HARMON, M.D., *Instructor in Anatomy.*

SAM A. AGNELLO, A.B., *Technical Instructor in Anatomy.*

The required courses of instruction in gross human anatomy, histology, and neurology are scheduled for five and one-half days a week for a period of eighteen weeks during the first year. Emphasis is placed upon the study of material in the laboratory. In an attempt to utilize more fully the laboratory time, visual educational methods are employed as fully as possible. These techniques consist of colored motion pictures of demonstration dissections, colored lantern slides, and motion pictures, both embryological and neurological. All of the instruction is designed to be as informal and as nearly individual as possible. General principles and the functional viewpoint

of living anatomy are stressed in the hope that the student may be stimulated to secure a working knowledge of anatomy in the broadest sense. Whenever possible, fresh tissues and living cells are made available for examination, and clinical cases exemplifying anatomical principles are studied whenever they are available at appropriate times. Through the co-operation of the Department of Radiology, the students are given an opportunity to study portions of the living human body as revealed by the fluoroscope and roentgenograph. The following elective courses are offered:

Demonstrations in Anatomy. Using dissections already prepared, weekly demonstrations of selected regions or systems are made by the members of the group. Sixth quarter—Two hours per week by arrangement. Second-year students in groups of 10.

Review in Anatomy. During the sixth quarter, a review in anatomy will be presented by the visual education methods outlined above, covering gross and neuro-anatomy, and histology.

Special Neuro-anatomy. Laboratory work and conferences upon selected portions of the human central nervous system. Limited to 6 junior or senior students. Two hours weekly by arrangement.

Brain modeling. Free-hand reconstruction in clay, from gross and sectioned material, of the chief tracts and nuclei of the human brain stem. By arrangement—4 to 10 students.

Experimental Neurology. An operative and laboratory study of the effect of various lesions upon the central and peripheral portions of the nervous system. 4 to 8 junior and senior students by arrangement. Prerequisite—operative surgery.

Advanced Studies in Anatomy. These may be arranged at any time under the direction of the various members of the staff.

Review for Orthopaedic Anatomy. A one hour weekly review of the anatomy related to orthopaedic surgery.

Review for Surgical Anatomy. A one hour weekly review of the anatomy related to general surgery.

Biochemistry

PHILIP HANDLER, B.S., M.S., Ph.D., *Professor of Biochemistry and Nutrition and Chairman of the Department.*

B.S., Coll. of City of New York, 1936; M.S. and Ph.D., Illinois, 1937 and 1939; *Biochemist, Duke Hospital, 1939—*

HAYWOOD MAURICE TAYLOR, B.S., M.S., Ph.D., *Professor of Toxicology and Associate Professor of Biochemistry.*

B.S., M.S., and Ph.D., North Carolina, 1920, 1921 and 1924; Instr. in Chem. and Pharmacut. Chem., North Carolina, 1920-1925; Research Chemist, E. R. Squibb and Sons, and Fisk Rubber Co., 1925-1928; Instr. in Ophthalmol. and Chemist to Wilmer Institute, Johns Hopkins Hosp., 1928-1930; Visiting Fellow in Forensic Med., New York Univ., 1934; *Associate Biochemist and Toxicologist, Duke Hospital, 1930—*

JEROME SYLVAN HARRIS, A.B., M.D., *Professor of Pediatrics and Associate Professor of Biochemistry.*

MARY LILIAS CHRISTIAN BERNHEIM, B.A., M.A., Ph.D., *Associate Professor of Biochemistry*.
B.A., M.A., and Ph.D., Cambridge, 1925, 1927, and 1929; Fellow, Newnham, 1927-1930; 1930—

GEORGE WILLIAM SCHWERT, JR., B.A., Ph.D., *Associate Professor of Biochemistry*.
B.A., Carlton Coll., 1940; Ph.D., Univ. of Minn., 1943; Instr. and Res. Assoc. in Biochem., Duke, 1945-1948; Markle Scholar in Med. Science, 1949; 1946—

SEYMOUR KORKES, B.A., M.D., *Associate Professor of Biochemistry*.
B.S., Brooklyn Coll., 1942, M.D., New York Univ., 1945; Intern, Queens Gen. 1945-1946, Capt., M. C., A.A.F. School of Aviation Med., 1946-1947, Instr. and Asst. Prof. of Pharmacol., N. Y. U. Coll. Med, 1947-1953, Markle Scholar in Med. Science, 1951-; 1953—

HENRY KAMIN, B.S., Ph.D., *Associate in Biochemistry and Principal Scientist at the Durham V.A. Hospital*.
B.S., Coll. of City of N. Y., 1940; Ph.D., Duke, 1948; Res. Asst. in Biochem., Duke, 1940-1949; 1940—

LEON LACK, A.B., M.S., Ph.D., *Research Instructor in Biochemistry*.
A.B., Brooklyn Coll., 1943, M.S., Michigan State, 1948, Ph.D., Columbia, 1953; 1953—

LEO B. DANIELS, *Technical Associate in Biochemistry*.

FELLOWS

SHUNZI MIZUHARA, B.S., M.D., *Fellow in Biochemistry*.
B.S., M.D., Okayama Univ., Japan, 1941, 1945; Instructor, Asst. Prof. of Biochemistry, Okayama Univ., 1945-1952; 1952—

MAUNG THAN NYUN, B.S., *U. S. Public Health Service Fellow in Biochemistry*.
B.S., University of Rangoon, 1942; 1952—

ASSISTANTS

IRWIN FRIDOVICH, B.S., *Research Assistant in Biochemistry*.
B.S., Coll. of City of New York, 1951; 1951—

ANDREW J. GLAID, A.B., M.S., *Research Assistant in Biochemistry*.
A.B., M.S., Duquesne Univ., 1949, 1950; 1950—

MAIRE T. HAKALA, M.S., *Research Assistant in Biochemistry*.
M.S., Univ. of Helsinki, 1947; 1950—

JOSEPH C. RUPP, A.B., *Research Assistant in Biochemistry*.
A.B., Muhlenburg, 1950; 1950—

GEORGE S. DUDA, B.S., *Research Assistant in Biochemistry*.
B.S., College of City of New York, 1951; 1952—

THOMAS F. LYNCH, B.S., M.S., *Research Assistant in Biochemistry*.
B.S., Virginia Polytechnic Institute, 1950, M.S., Princeton, 1953; 1953—

JACK PREISS, B.S., *Research Assistant in Biochemistry*.
B.S., The College of the City of New York, 1953; 1953—

CARL ROTHSCHILD, B.S., *Research Assistant in Biochemistry*.
B.S., The College of the City of New York, 1952; 1952—

SIDNEY M. SHERMAN, B.S., M.S., *Research Assistant in Biochemistry*.
B.S., M.S., University of Oregon, 1949, 1953; 1953—

YASUO TAKENAKA, B.S., M.S., *Research Assistant in Biochemistry*.
B.S., M.S., Stanford, 1949, 1953; 1953

The required course in general biochemistry for first-year students is given over a period of eighteen weeks during the first year. Two lectures, four laboratory periods, and one conference period per week are devoted first to the correlation of the fundamental facts and theories of physical and organic chemistry of proteins, fats and carbohydrates with the chemistry of living organisms; followed by an intensive study of the chemical aspects of the processes of digestion, absorption, circulation and respiration, acid-base and salt equilibrium, interme-

diary and over-all metabolism. Each student carries out on himself a fairly complete metabolism balance study involving quantitative analyses of blood and urine.

Since the success of the students in this course is largely determined by the adequacy and ready availability of their premedical training, it is urged that all students review the fundamental laws, theories, and facts of chemistry before the beginning of the course. A circular outlining the topics requiring special attention is sent to all students upon admission. Additional copies of the circular may be obtained from the Dean's Office.

Biochemical Research. The facilities of the department, including various types of research equipment and the clinical material of the blood chemistry laboratory, are available to properly qualified students for independent or supervised investigations. Chemical investigations of problems in biochemistry or in conjunction with the clinical and pathological departments may be carried on.

Chemistry of Proteins and Enzymes. A two-hour seminar is given weekly throughout the Autumn, Winter and Spring Quarters.

Physical Biochemistry. A two-hour lecture course with demonstrations, given weekly in Autumn and Winter Quarters. Given alternately with *Chemistry of Proteins and Enzymes*.

Intermediary Metabolism. A two-hour lecture course and seminar conducted during Autumn, Winter and Spring Quarters. Given alternately with *Seminar in Nutrition*.

Advanced Seminar in Nutrition. A two-hour lecture and seminar course in modern nutritional concepts. Given alternately with *Intermediary Metabolism* during Autumn Quarter.

Biochemistry of Disease. A seminar course meeting once weekly to discuss etiology and pathogenesis of metabolic diseases from the biochemical viewpoint. Given in alternate years in the Spring Quarter.

Physiology and Pharmacology

FRANK GREGORY HALL, B.A., M.A., Ph.D., *Professor of Physiology and Chairman of the Department.*

B.A., Milton, 1917; M.A., and Ph.D., Wisconsin, 1921 and 1923; Prof. of Biol., Milton, 1923-1926; Assoc. Prof. and Prof. of Zool., Duke Univ., 1926-1942; Lt. Col., Chief, Physiol. Branch, Army Air Forces, 1942-1945; 1945—

GEORGE SHARP EADIE, M.A., M.B., Ph.D., *Professor of Physiology and Pharmacology.*

M.A. and M.B., Toronto, 1923 and 1921; Ph.D., Cambridge, 1927; Rotat. Int., Toronto Gen. Hospital, 1921-1922; Demonstrator in Biochem., Toronto, 1923-1925; Asst. in Physiol., Dalhousie, 1927-1928; Assoc. in Physiol., Johns Hopkins Med. Sch., 1928-1930; 1930—

FREDERICK BERNHEIM, A.B., Ph.D., *Professor of Pharmacology.*

A.B., Harvard, 1925; Ph.D., Cambridge, 1928; Nat'l Research Council Fellow, Johns Hopkins Med. Sch., Dept. of Physiol. Chem., 1929-1930; 1930—

OTTO GAUER, M.D., *Associate Professor of Physiology and Pharmacology.*

M.D., Heidelberg, 1935; Assoc. Prof. Physiol., Heidelberg, 1942-46, Res. Assoc., U.S.A.F., 1946-53; 1953—

*FOREST DRAPER MCCREA, B.S., M.S., Ph.D., *Associate Professor of Physiology and Pharmacology.*

B.S., Purdue, 1918; M.S., Illinois, 1923; Ph.D., Wisconsin, 1927; Instr. in Physiol., Illinois, 1920-1923; Instr. in Physiol., Wisconsin Med. Sch., 1923-1927; Asst. Prof. of Physiol. and Pharmacol., Georgia Med. Sch., 1927-1929; Sr. Instr. in Physiol., Western Reserve Med. Sch., 1929-1930; 1930—

KENNETH EARL PENROD, B.S., Ph.D., *Associate Professor of Physiology and Pharmacology and Assistant Dean.*

B.S., Miami Univ., 1938; Ph.D., Iowa State Coll., 1942; Instr. in Physiology, Miami Univ., 1940-1941; Army Air Forces, 1942-1946; Asst. Prof. in Physiology, Iowa State Coll., 1946; Asst. Prof. of Physiology, Boston Univ., 1946-1950; 1950—

MACDONALD DICK, B.A., M.A., M.D., *Assistant Professor of Physiology and Pharmacology, and Associate in Medicine.*

B.A. and M.A., Virginia, 1922 and 1923; M.D., Johns Hopkins, 1928; Int. and Asst. Res., Vanderbilt Univ. Hosp., 1928-1930; Asst. in Path. and Bact., Rockefeller Instit., 1930-1932; *Assistant Physician, Duke Hospital, 1932—*

WILLIAM ERNEST DETURK, B.A., M.A., Ph.D., M.D., *Assistant Professor of Pharmacology.*

B.A., Illinois, 1937; M.A., Illinois, 1938; Ph.D., Duke, 1940; M.D., Vanderbilt, 1948; Instructor in Biology, Vanderbilt, 1940-1943; Res. Associate, Vanderbilt, 1943-1947; Intern, Vanderbilt Univ. Hosp., 1948-1949; 1949—

WAYLAND HULL, B.A., Ph.D., *Assistant Professor of Physiology.*

A.B., Milton, 1941; Ph.D., Duke, 1950; Instr. Physiol., Duke, 1947-49; Chief, Respiration Unit, Aero Med. Lab., U.S.A.F., 1951-53; 1953—

FRANK LIBMAN ENGEL, A.B., M.D., *Associate Professor of Medicine, and Associate in Physiology.*

FRED ZECHMAN, B.S., M.S., *Instructor in Physiology.*

B.S., Otterbein, 1949; M.S., Maryland, 1951; 1953—

JUNE BARKER, B.S., *Research Assistant in Physiology.*

B.S., Univ. Rochester, 1951; 1952—

B. T. COLE, B.S., M.S., *Instructor in Physiology.*

B.S., Duke, 1949; M.S., Duke, 1951; 1953—

HOWARD LANGLEY, *Technical Associate in Physiology.*

The course in medical physiology for first-year students is given over a period of eighteen weeks during the first year. There are lectures, laboratories, and conferences each week in which are presented the general principles of human physiology and their general application to the practice of medicine. This course runs parallel to biochemistry.

The course in pharmacology is given in the first quarter of the second year. Lectures, laboratories, and conferences deal with the mode of action of drugs in terms of biochemical and physiological processes.

Physiological and Pharmacological Research: The facilities of the department include modern types of research equipment. There are special facilities for research in the field of respiration; circulation; and cellular metabolism. Properly qualified students are permitted to undertake original research in physiology and pharmacology under direction of various members of the staff.

Seminars in special fields of physiology are offered to graduate students by various members of the staff.

* Resigned, effective 30 December 1953.

Microbiology

DAVID TILLERSON SMITH, A.B., M.D., *Professor of Bacteriology, Chairman of the Department, and Associate Professor of Medicine.*

A.B., Furman, 1918; M.D., Johns Hopkins, 1922; Int. in Ped., Johns Hopkins Hosp., 1922-1923; Asst. in Path. and Bact., Rockefeller Instit., 1923-1924; Bacteriologist, Pathologist and Director, Research Laboratory of N. Y. State Hosp. for Tuberculosis, Raybrook, 1924-1930; *Bacteriologist and Associate Physician, Duke Hospital, 1933—*

NORMAN FRANCIS CONANT, B.S., A.M., Ph.D., *Professor of Mycology and Associate Professor of Bacteriology.*

B.S., Bates, 1930; A.M. and Ph.D., Harvard, 1931 and 1933; Research Fellow, Laboratoire de Parasitologie, Fac. de Medicine, Paris, 1933-1934; Research Asst., Harvard Med. Sch. and Mass. Gen'l. Hosp., Jan. 1, to Oct. 1, 1935; Professor of Mycology and Associate Professor of Bacteriology, 1935-1946; *Mycologist, Duke Hospital, 1946—*

SAMUEL PRESTON MARTIN, A.B., M.D., *Associate Professor of Medicine and Assistant Professor of Bacteriology.*

JOSEPH W. BEARD, B.S., M.D., *Associate Professor of Virology and Professor of Surgery.*

*HARVEY GRANT TAYLOR, A.B., A.M., M.D., *Associate Professor of Bacteriology and Pediatrics, and Associate Dean.*

SUSAN GOWER SMITH, A.B., M.A., *Associate in Nutrition.*

A.B., Barnard, 1919; M.A., Columbia, 1924; Chemist, N. Y. State Hosp., 1926-1930; Instr. in Biochem., Instr. in Physiol. and Pharm., Assoc. in Physiol. and Nutrition, and Associate in Med., Duke Hospital, 1930-1946; 1930—

HILDA POPE, A.B., A.M., Ph.D., *Assistant Professor of Bacteriology.*

A.B., Ga. State Coll. for Women, 1944; A.M., Ph.D., Duke, 1946, 1949; *Assistant Bacteriologist, Duke Hospital, 1948—*

MARY ALVERTA POSTON, A.M., *Associate in Bacteriology.*

A.M., Duke, 1939; Asst. in Biol. Lab., Johns Hopkins Hosp., 1922-1930; *Assistant Bacteriologist, Duke Hospital, 1930—*

EDWARD A. ECKERT, B.A., M.S., Ph.D., *Instructor in Bacteriology.*

B.A., Brooklyn College, 1941; M.S., Massachusetts Institute of Technology, 1948; Ph.D., Duke, 1951; *Scholar in Cancer Research of American Cancer Society, 1952—*

SUYDAM OSTERHOUT, B.S., M.D., *Instructor in Bacteriology and Assistant Resident in Medicine.*

H. W. CRAIG, *Technical Associate in Serology.*

Bacteriology, Immunology, and Mycology. The required course is given in the fourth quarter. An intensive study is made of the common bacteria, fungi, and viruses which cause disease in man. The scope of the laboratory course is reasonably wide and acquaints the student with all the methods and procedures employed in bacteriological laboratories. Most of the lecture time is devoted to the immunological and epidemiological aspects of infection. The instruction is designed to give the students a clear conception of: (1) how organisms gain entrance to the body, (2) the type of poisons which they produce, (3) the nature of immune bodies which are produced by the host, and (4) the methods of preventing the disease by active and passive immunization.

Research Bacteriology. Opportunities for original investigations are afforded a few specially qualified students.

Clinical Bacteriology. During their clinical clerkships on medicine (one quarter each for junior and senior classes), the students may per-

* On leave of absence.

form the routine and special bacteriological work for the patients assigned to them on the teaching service, under the direction of the Department of Bacteriology and in parallel with the Biological Division of the medical clinic.

Pathology

WILEY DAVIS FORBUS, A.B., M.D., *Professor of Pathology and Chairman of the Department.*

A.B., Washington and Lee, 1916; M.D., Johns Hopkins, 1923; Res. and Assoc. Pathologist, Johns Hopkins Hosp., 1926-1927 and 1929-1930; Guest Asst. Pathol. Instr., Ludwig Maximilian's Univ., Munich, 1928; Pathol., Balto. City Hosps.; Consulting Pathologist, Frederick City Hosp., 1925-1930; Asst., Instr. and Assoc. in Path., Johns Hopkins Med. Sch., 1923-1930; *Pathologist, Duke Hospital, 1930—*

ROGER D. BAKER, B.A., M.D., *Professor of Pathology and Chief, Pathology, V.A. Hospital.*

B.A., Univ. of Wisc., 1924; M.D., Harvard, 1928; Asst. Res., Johns Hopkins, 1928-30; Instr., Anat., Duke, 1930-32; Instr., Path., Duke, 1932-34; Asst. Prof., Duke, 1935-44; Prof., Path., Med. Coll. Alabama, 1944-52; *Prof., Path., Duke, 1953—; Chief, Lab. Service, V.A. Hosp., Durham, 1953—*

GEORGE MARGOLIS, A.B., M.D., *Associate Professor of Pathology.*

A.B., Johns Hopkins, 1936; M.D., Duke, 1940; Int. in Path., Duke, 1940-1941; Asst. Res. in Path., Duke, 1941-1943; Res. in Path., Duke, 1943-1944; M.C., A.U.S., 1944-1947; Volunteer in Neuropath., Montefiore Hosp., N. Y., 1948; Assoc. in Path. in charge of Neuropath., 1947-1951; *Associate Professor of Pathology in charge of Neuropathology, 1951—*

E. STANFIELD ROGERS, B.S., M.D., *Assistant Professor of Pathology.*

B.S., Duke, 1942; M.D., Duke, 1944; Intern in Path., April, 1943-October, 1943 and July, 1944-April, 1945; A.U.S., 1945; Res. in Path., U. Tenn., 1946; Fellow Rockefeller Inst. for Medical Research, 1946-1952; *Associate and Assistant Professor in Pathology, Duke Hospital, 1952—*

ALBERT G. SMITH, M.D., *Associate in Pathology and Assistant Pathologist, V.A. Hospital.*

M.D., Wash. U., 1947; Rot. Int., St. Luke's Hosp., St. Louis, 1947-1948; Asst. Res. and Res. in Path., U. Ark. Hosp. and Sch. Med., 1948-1950; Vol. Asst. Surg. Path., Columbia U. Coll. Phys. and Surg., 1950; Asst. Res. in Path., Duke, 1950-1951; Res. in Path., Duke, 1951-1952; Instructor in Path., Duke, 1951-1952; *Associate in Pathology, Duke Hospital, 1952—; Assistant Pathologist, V.A. Hosp., 1953—*

BERNARD F. FETTER, A.B., M.D., *Associate in Pathology.*

A.B., Johns Hopkins, 1941; M.D., Duke, 1944; Int., Surg., Duke 1944-45; U.S.A., M.C., 1945-47; Res., Path., V.A. Hosp., Ft. Howard, Md., 1947-48 and 1950-51; Res. and Asst., Path., Duke, 1951-52; Instr., 1951-53; Res., 1952-53; *Assoc., Path., 1953—*

CARL BISHOP, *Technical Associate in Pathology.*

J. PHILLIP PICKETT, *Technical Instructor in Pathology.*

GRADUATE STUDENTS (HOUSE STAFF)

RESIDENTS AND INSTRUCTORS

WILLIAM M. BERTON, M.D., Univ. Calif., 1949.

WALTER R. BENSON, M.D., Duke, 1944.

ASSISTANT RESIDENTS AND INSTRUCTORS

ROGER K. HAUGEN, A.B., Augustana Coll., 1943; B.S., Univ. of South Dakota, 1946; M.D., Washington Univ., 1948.

DAVID S. JOHNSON, M.D., Washington Univ., 1948.

INTERNS AND ASSISTANTS

ELMER V. DAHL, B.S., Univ. Sou. Calif., 1948; M.D., Univ. Sou. Calif., 1952.

JAMES P. ANDREWS, A.B., Princeton, 1946; M.D., Western Res. Med. Sch., 1950.

JOHN D. DiMICHELE, A.S., Green Mountain Jr. Coll., 1940; B.S., Univ. Vermont, 1942; M.D., Univ. Vermont Coll. Med., 1945; (Rot. Intern from Orthopedics).

GLENN YOUNG, M.D., Duke, 1948; (Rot. Intern from Surgery).

SPENCER BASS, A.B., Univ. N. C., 1944; M.D., Univ. Virginia, 1949.

General Pathology. The course in general pathology is given during the fifth and sixth quarter of the curriculum, following completion of the prerequisite courses in anatomy, physiology, biochemistry and bacteriology. All the work of the class is done with small groups, each under the guidance of a senior instructor and his junior assistant. The histological aspects of the pathological processes are studied coincidentally with the gross anatomical and physiological alterations of the tissues, thus maintaining a unity of conception of disease. As the various pathological processes and the diseases arising from their elaboration are studied by the student groups, assignments involving reports on the study of groups of cases are made to individual students. The group work and the individual student reports are supplemented by weekly conferences involving the class as a whole and dealing with problems presented by current autopsies and with other problems of general importance. Student collaboration in post-mortem studies is required. Cases thus studied are presented by the student before the class under the direction of the staff; this takes the form of a clinical-pathological conference in which each student plays a particular role.

Elective Courses. Special courses in pathology are given to students who have completed the course in general pathology. These courses are available through special arrangement.

Clinical-Pathological Conference. A weekly clinical-pathological conference for advanced study is held on Saturdays. It is open to all persons interested, but is designed especially for the Hospital and Medical School Staff. Attendance by all the students is encouraged but is optional. Miscellaneous weekly pathological conferences dealing with current cases under treatment on the various services are held for instruction of the staffs concerned.

Student Research. Research facilities are provided for competent students. Those who show an interest in investigative work are given every encouragement and are allowed to work independently or in collaboration with the staff.

Postgraduate Instruction. The staff of the department is composed of senior nonresident and junior resident members. The junior resident staff consists of interns, assistant residents, and a resident; all of these are active teachers as well as advanced students of disease. Ample opportunity for the development of a career in the field of pathology is provided for these men.

Medicolegal Instruction. The department works in close cooperation with the local coroner's office. Special medicolegal investigation

for others are undertaken from time to time. The department collaborates with other departments of the Schools of Medicine and Law in a course in legal medicine that is given in alternate years.

Medicine

EUGENE ANSON STEAD, JR., B.S., M.D., *Florence McAlister Professor of Medicine and Chairman of the Department.*

B.S. and M.D., Emory Univ., 1928 and 1932; Int. Med., Peter Bent Brigham Hosp., 1932-1933; Research Fellow in Med., Harvard, 1933-1934; Int. Surg., Peter Bent Brigham Hosp., 1934-1935; Asst. Res. in Med., Cincinnati Gen'l. Hosp., 1935-1936; Res. in Med., Cincinnati Gen'l. Hosp., 1936-1937; Instr. in Med., Univ. of Cincinnati, 1935-1937; Res. Phys., Thorndike Memorial Laboratory; Asst. in Med., Harvard and Boston City Hosp., 1937-1939; Associate in Med., Peter Bent Brigham Hosp., 1939-1942; Instr. in Med., Harvard, 1939-1941; Assoc. in Med., Harvard, 1941-1942; Act. Phys-in-Chief, Peter Bent Brigham Hosp., 1942; Prof. of Med. and Phys-in-Chief, Emory Div. of Grady Hosp., 1942-1946; Dean, Emory Univ. Sch. of Med., 1945-1946; *Physician, Duke Hospital, 1947—*

JASPER LAMAR CALLAWAY, B.S., M.D., *Professor of Dermatology and Syphilology.*
M.D., Duke, 1932; B.S., Alabama, 1935; Asst. Instr. in Derm. and Syphil., Univ. of Pa. Med. Sch., 1932-1933; Int. and Asst. Res. in Med., Duke Hosp., 1933-1935; Instr. in Phys. Diag. and Path., Univ. of Alabama, Jan.-July, 1935; Instr. in Derm. and Syphil., Pa. Sch. of Med., 1935-1937; Asst. Field Physician, U. S. Public Health Serv., Feb.-July, 1937; *Physician and Dermatologist, Duke Hospital, 1937—*

OSCAR CARL EDVARD HANSEN-PRÜSS, A.B., M.D., *Professor of Medicine.*

A.B., Universidad Mayor de San Marcos, 1919; Vol. Asst. in Path., Friedrich Wilhelm Universität, Berlin, 1920-1921; M.D., Johns Hopkins, 1924; Int., Asst. Res. in Med., and Asst. Phys., Johns Hopkins Hosp., 1924-1930; Asst. Instr. and Assoc. in Medicine, Johns Hopkins Med. Sch., 1925-1930; *Physician, Duke Hospital, 1930—*

JULIAN MEADE RUFFIN, A.B., M.A., M.D., *Professor of Medicine.*

A.B., M.A., and M.D., Virginia, 1921, 1922, and 1926; Int. and Res., Bellevue Hosp., N. Y., 1926-1928; Instr. and Phys. Diag., George Washington Med. Sch., 1928-1930; *Physician, Duke Hospital, 1930—*

DAVID TILLERSON SMITH, A.B., M.D., *Professor of Bacteriology, Chairman of the Department, and Associate Professor of Medicine.*

WALTER KEMPNER, M.D., *Professor of Medicine.*

M.D., Heidelberg, 1927; Int. in Med., Univ. Hosp., Heidelberg, 1926-1927; Research Assoc. and Asst. to Prof. O. Warburg, Kaiser Wilhelm Institut. f. Zellphysiologie, Berlin-Dahlem, 1927-1928 and 1933-1934; Asst. Phys., Univ. Hosp. of Berlin, 1928-1933; *Physician, Duke Hospital, 1934—*

WILLIAM MCNEAL NICHOLSON, A.B., M.D., *Professor of Medicine, in Charge of Post-graduate Education and Diseases of Metabolism.*

A.B., Duke, 1927; M.D., Johns Hopkins, 1931; Int. in Med., Johns Hopkins Hosp., 1931-1932; Asst. in Path. and Med., Johns Hopkins Med. Sch., 1932-1935; *Physician, Duke Hospital, 1935—*

EDWARD STEWART ORGAIN, M.D., *Professor of Medicine.*

M.D., Virginia, 1930; Int. Asst. Res. and Res. in Med., Univ. Hosp., Cleveland, 1930-1933; Res. Fellow in Med., assigned to Cardiology, Mass. Gen'l. Hosp., 1933-1934; *Physician, Duke Hospital, 1934—*

JAMES VAUGHN WARREN, A.B., M.D., *Professor of Medicine.*

A.B., Ohio State U., 1935; M.D., Harvard, 1939; House Officer, Med., Peter Bent Brigham Hosp., 1939-1941; Asst. Res. and Research Fellow, Med., Harvard, 1941-1942; Med. Investigator, Office of Scientific Research and Development, 1942-1946; Instr., Med., Emory, 1942-1946; Asst. Prof., Med., Yale, 1946-1947; Prof. of Physiol., Chairman, Dept. of Physiol. and Assoc. Prof. of Med., Emory, 1947-1951; Prof. of Med., Emory, 1951-1952; *Professor of Medicine, Duke, 1952—*

FRANK LIBMAN ENGEL, A.B., M.D., *Associate Professor of Medicine, and Associate in Physiology.*

A.B., Dartmouth Coll., 1934; M.D., Johns Hopkins, 1938; Int., Rot., Mt. Sinai Hosp., 1939-1941; House Phys., Mt. Sinai, 1941; Fellow, Nat'l. Res. Council, Yale, 1941-1943; Research Assoc., Yale, 1943-1946; Assoc. in Med., Emory Univ. Sch. of Med., 1946-1947; *Assistant Physician, Duke Hospital, 1947—*

JAMES PAISLEY HENDRIX, B.S., M.A., M.D., Associate Professor of Medicine and Therapeutics.

B.S., Davidson, 1925; M.A., Davidson, 1926; M.D., Pennsylvania, 1930; Int., Hosp. of Univ. of Pa., 1930-1932; Res. Fellow in Pharm., Pennsylvania, 1932-1935; Instr. in Pharm., 1935-1938; Part-time Staff Phys., Med. and Gastro-Intestinal Clinics, University Hosp., 1935-1938; Lecturer in Pharm., Univ. of N. C. Med. Sch., 1943-1944; *Assistant Physician, Duke Hospital, 1938—*

JOHN BAMBER HICKAM, A.B., M.D., Associate Professor of Medicine.

A.B., Harvard College, 1936; M.D., Harvard, 1940; Int., Peter Bent Brigham Hosp., 1940-1942; Med. Res., Grady Hosp., 1942-1943; U.S. Army, 1943-1946; Asst. in Med., Emory Univ. Sch. of Med., 1946-1947; *Assistant Physician, Duke Hospital, 1947—*

E. CHARLES KUNKLE, B.A., M.D., Associate Professor of Medicine in Charge of Neurology.

B.A., Haverford College, 1935; M.D., Cornell University Medical College, 1939; Intern and Assistant Resident, New York Hospital, and Assistant in Medicine, Cornell University Medical College, 1939-1942; Medical Corps, Army Air Forces (Major), 1942-1946; Research Fellow, New York Hospital, and Instructor in Medicine, Cornell University Medical College, 1946-1948; *Assistant Physician, Duke Hospital, 1948—*

ELIJAH EUGENE MENEFE, JR., B.S., M.D., Associate Professor of Medicine.

B.S. and M.D., Duke, 1936; Int., N. Y. State Sanatorium, Raybrook, July 1-Aug. 31, 1936; Int. in Med., Duke Hosp., 1936-1937; Research Fellow in Med. and Bact., Duke Med. Sch., 1937-1938; Asst. Cardiology, Mass. Gen'l. Hosp., 1938-1939; Res. in Tbc., Bellevue Hosp., New York City, Jan. 1-Dec. 31, 1939; *Assistant Physician, Duke Hospital, 1940—*

JACK DUANE MYERS, A.B., M.D., Associate Professor of Medicine.

A.B., Stanford Univ., 1933; M.D., Stanford Univ. Sch. of Med., 1937; Int. in Med., Stanford Hosp., 1936-1937; Asst. Res. in Med., Stanford Hosp., 1937-1938; Res. Fellow in Med., Harvard Med. School, 1938-1939; Asst. Res. in Med., Peter Bent Brigham Hosp., 1939-1940; Res. in Med., Peter Bent Brigham Hosp., 1940-1942; Lt. Col., U. S. Army, Med. Corps, 1942-1945; Assoc. in Med., Emory Univ. Sch. of Med., 1945-1946; *Assistant Physician, Duke Hospital, 1947—*

ELBERT LAPSLEY PERSONS, A.B., M.D., Associate Professor of Medicine, Director of Student Health, and Associate Professor of Preventive Medicine and Public Health.

A.B., Ohio State, 1923; M.D., Harvard, 1927; Int., Huntington Mem. Hosp., Boston, 1925-1926; Int. and Res. in Med., Mass. Gen'l. Hosp., 1927-1930; Teaching Fellow in Med., Harvard Med. Sch., 1929-1930; Res. in Med. and Assistant Physician, Duke Hospital, 1930-1942; Col., Chief of Med. Serv., 65th (U. S.) Gen. Hosp., 1942-1945; *Assistant Physician, Duke Hospital, 1945-1946; 1945—*

RALPH WAYNE RUNDLES, A.B., Ph.D., M.D., Associate Professor of Medicine.

A.B., DePauw, 1933; Ph.D., Cornell, 1937; M.D., Duke, 1940; Asst. and Instr. in Anat., Cornell, 1933-1937; Int., Asst. Res. and Res. in Med., Univ. of Mich. Hosp., 1940-1943; Instr. and Research Asst. in Med., Simpson Mem. Instit., 1943-1945; *Assistant Physician, Duke Hospital, 1945—*

MACDONALD DICK, B.A., M.A., M.D., Assistant Professor of Physiology and Pharmacology, and Associate in Medicine.

SAMUEL PRESTON MARTIN, M.D., Associate Professor of Medicine and Assistant Professor of Bacteriology.

M.D., Washington Univ. Sch. Med., 1941; Intern, Pathology, and Asst., Dept. of Pathology, Washington Univ. Sch. Med., 1941; Intern and Asst. Res., Med., Washington Univ. Sch. Med., 1942-1944; Asst., Dept. of Med., Washington Univ. Sch. Med., 1943-1944; U. S. Army Med. Corps, 1944-1947; Resident and Instr., Med., Duke, 1947-1948; Research Fellow, American College of Physicians, The Rockefeller Inst. for Med. Res., 1948-1949; Markle Scholar in Med. Science, 1950; *Assistant Physician, Duke Hospital, 1949—*

TALMAGE LEE PEELE, A.B., M.D., Associate Professor of Anatomy and Assistant Professor of Medicine.

JOHN BERNARD PFEIFFER, JR., B.S., M.D., Assistant Professor of Medicine.

B.S., St. Peter's College, Jersey City, N. J., 1938; M.D., Cornell, 1942; Intern, Med., New York Hosp., 1942-1943; Military Service, 1943-1946; Asst. Res. and Asst. in Med. and Neurol., New York Hosp. and Cornell, 1946-1948; Instr., Med., Cornell; Asst. Phys. to Out-patients, New York Hosp., and Section Chief, Neurology, Kingsbridge Road, 1948-1949; *Assistant Physician, Duke Hospital, 1949—*

WALLACE N. JENSEN, B.S., M.D., Assistant Professor of Medicine.

B.S., Univ. of Utah, 1942; M.D., Univ. of Utah, 1945; Intern, Medicine, Johns Hopkins, 1945-1946; U. S. Army Med. Corps, 1946-1948; Asst. Res. and Resident, Medicine, Salt Lake V.A. Hosp., 1948-1950; Fellow, Medicine (Hematology), Univ. of Utah, 1950-1953; *Assistant Professor of Medicine, Duke, 1953—*

ALBERT ELLSWORTH PUGH, M.A., M.D., Assistant Professor of Medicine.

M.A., Univ. of Kansas, 1939; M.D., Univ. of Kansas, 1941; Intern and Resident, Univ. Hosp. of Cleveland, 1941-1942; Clinical Pathology postgraduate, Univ. of Michigan, 1943; U. S. Army, 1943-1946; Chief of Cardiology and Acting Chief, Professional Services, V.A., Fort Howard, Md., 1946-1953; *Assistant Professor of Medicine, Duke, and Chief, Professional Services, V.A., Durham, 1953—*

THEODORE B. SCHWARTZ, B.S., M.D., Assistant Professor of Medicine.

B.S., Franklin and Marshall College, 1939; M.D., Johns Hopkins, 1943; Intern, Medicine, Johns Hopkins, 1943; U. S. Army Med. Corps, 1944-1946; Asst. Res. and Res., Medicine, Univ. of Utah, 1946-1948; Fellow, Medicine, Duke, 1948-1950; Damon Runyon Senior Clinical Research Fellow; Associate in Medicine, Duke, 1948-1953; *Assistant Professor of Medicine, Duke, 1953—*

***BERNARD C. HOLLAND, B.S., M.D., Associate in Medicine.**

B.S., Emory, 1940; M.D., Emory, 1943; Intern, Med., Grady, 1943; Asst. Res., Med., Grady, 1944; Asst. Res., Med., Barnes Hospital, St. Louis, 1944-1945; Asst. Res., Med., Grady, 1945; U. S. Army Med. Corps, 1945-1947; Asst. Res., Med., Duke, 1947-1948; Res. and Instr. in Med., 1948-1949; Fellow, USPHS, 1949; *Assistant Physician, Duke Hospital, 1948—*

GRACE PARDRIDGE KERBY, B.S., M.D., Assistant Professor of Medicine.

B.S., Fla. State College, 1933; M.D., Duke, 1946; Intern, Med., 1946-1947; Asst. Res. Med. and Derm., 1945-50; Res., Derm., Duke, 1950-51; Res., Med., Duke 1950-1951; *Assistant Physician, Duke Hospital, 1947—*

JESSICA H. LEWIS, A.B., M.D., Associate in Medicine.

A.B., Goucher College, Baltimore, 1938; M.D., Johns Hopkins, 1942; Intern, Rotating Hospital for Women of Maryland, 1942-1943; Assistant Resident, Medicine, University of California Hospital, 1943-1944; Research Fellow, Thorndike Memorial Laboratory and Harvard University, and Assistant in Medicine, Boston City Hospital, 1944-1946; Research, Emory University School of Medicine, 1946-1947; Post-doctorate Research Fellow, U.S.P.H.S., Physiology Dept., U.N.C., Chapel Hill, and Duke, 1947-1948; Research Associate, Dept. Physiology, U.N.C., Chapel Hill, 1948; *Assistant Physician, Duke Hospital, 1947—*

CHARLES WOODROW STYRON, B.S., M.D., Associate in Medicine.

B.S., N.C. State, 1934; M.D., Duke, 1938; Int., Ped., Duke, July 1938-March 1939; Int. and Res., Med., Boston City Hosp., April 1939-October 1940; Elliott P. Joslin Fellow in Med., New England Deaconess Hosp., October 1940-September 1942; Lt. Comdr., M.C., USNR, October 1942-February 1946; *Assistant Physician, Duke Hospital, 1946—*

ERNST PESCHL, M.D., Associate in Medicine.

M.D., Berlin, 1930; Int., Med., Univ. Hosp., Berlin, 1929-1930; Vol. Asst. Phys., Univ. Hosp., Berlin, 1930-1933; Research Asst., Med., Duke, 1947-1952; *Research Associate in Medicine, Duke, 1952—*

INSTRUCTORS

SHERWOOD W. BAREFOOT, B.S., M.D., Instructor in Dermatology and Syphilology.

B.S., U.N.C., 1936; M.D., Duke, 1938; Intern and Asst. Res., Med., Duke, 1938-1939; Asst. Res., Derm. and Syphil., Duke, 1940; Dermatologist, U. S. Army, 1941-1945; Research Fellow, Bellevue Hosp., 1940-1941; Fellow, Derm. and Syphil., Duke, 1945-1946; Private Practice in Dermatology and Syphilology, Greensboro, N. C.; *Assistant Physician, Duke Hospital, 1946—*

PAUL C. CAMPBELL, M.D., Instructor in Dermatology and Syphilology.

M.D., Univ. of Buffalo Sch. of Med., 1936; Intern, Edward J. Meyer Memorial Hospital, Buffalo, N. Y., 1936-1937; Asst. Res., Dermatology and Syphilology, Edward J. Meyer Memorial Hospital, Buffalo, N. Y., 1937-1940; Private Practice, Fayetteville, N. C., 1940-1941; U.S.P.H.S., 1941-1950; Private Practice, Fayetteville, N. C., 1950; *Assistant Physician, Duke Hospital, 1951—*

ALBERT DERWIN COOPER, A.B., M.D., Instructor in Medicine.

A.B. and M.D., George Washington, 1931 and 1932; Int., Rotat., Garfield Mem. Hosp., Washington, 1931-1932; Int. in Path. and Med., Duke Hospital, 1932-1934; Priv. Pract., Internal Med. and Allergy, 1934-1944; Med. Dir., Durham County Tuberculosis Sanat.; Asst. Health Officer, Durham City and County Health Departments, Durham, N. C., 1944; *Assistant Physician, Duke Hospital, 1944—*

SAMUEL L. ELFMON, B.S., M.D., Instructor in Medicine.

B.S., Univ. of Richmond, 1932; M.D., Medical College of Virginia, 1935; Intern, Rotating, Highsmith Hospital, Fayetteville, N. C., 1935-1936; Resident, Med., Highsmith Hosp., 1936-1937; Private Practice, 1937-1942; U. S. Army Medical Corps, 1942-1945; Private Practice, Fayetteville, N. C., since December, 1945; *Assistant Physician, Duke Hospital, 1949—*

* On leave, 1953-54.

WALTER CLEVELAND FITZGERALD, N.C.B.S., M.D., *Instructor in Dermatology and Syphilology.*

N.C.B.S., Davidson College, 1940; M.D., Univ. of Virginia, 1943; Intern, Medicine, Univ. of Virginia, 1944; Asst. Director Student Health, Univ. of Virginia, 1945; U. S. Army Medical Corps, 1945-1947; Resident Dermatology and Syphilology, Univ. of Virginia, March 1947-July 1950; *Assistant Physician, Duke Hospital, 1951—*

JOSEPH S. HIATT, JR., A.B., M.D., *Instructor in Medicine.*

A.B., Duke, 1936; M.D., Duke, 1939; Intern, N. C. Sana., 1940; Intern and Asst. Res., Medicine, Duke, 1940-1942; U. S. Army (MC), 1942-1945; Resident physician, N. C. Sana., 1945-1946; Associate Medical Director and Associate Supt., N. C. Sana., 1946-1952; Instructor in Medicine, Duke, 1949-1950; Private practice, Southern Pines, N. C., 1953—; *Instructor in Medicine, Duke, 1953—*

S. FRANK HORNE, A.B., M.D., *Instructor in Dermatology and Syphilology.*

A.B., Duke, 1939; M.D., Duke, 1942; Int. and Res. in Med., Bowman Gray Sch. of Med., 1942-43; U. S. Army Med. Corps, 1943-46; Vet. Res. in Dermatology and Syphilology, Univ. of Michigan, 1946-49; *Assistant Physician, Duke Hospital, 1950—*

JOSEPH MCCrackEN, A.B., M.D., *Instructor in Medicine.*

A.B. and M.D., Duke, 1934 and 1937; Intern, Pathology, Baltimore City Hospital, 1937-1938; Intern, Medicine, Baltimore City Hospital, 1938-1939; Assistant Resident in Medicine, Grady Hospital, 1939-1940; Resident in Medicine, Pratt Diagnostic Hospital, Boston, Mass., 1940-1941; Major, U. S. Army Medical Corps, 1942-1946; Private Practice in Internal Medicine, Durham, N. C., 1946; *Assistant Physician, Duke Hospital, 1946—*

WILLIAM VANCE SINGLETARY, A.B., M.D., *Instructor in Medicine.*

A.B., University of North Carolina, 1940; M.D., Duke, 1943; Intern, Med., Duke, 1944; Asst. Res., Med., Watts, 1944-1945; Res., Med., Watts, 1945-1946; U. S. Army Medical Corps, 1946-1948; Asst. Res., Med., Duke, 1948; Private Practice, Internal Medicine, Durham, 1948; *Assistant Physician, Duke Hospital, 1948—*

K. D. WEEKS, B.S., M.D., *Instructor in Medicine.*

B.S., Davidson College, Davidson, N. C., 1935; M.D., Duke, 1939; Intern in Medicine, Duke, 1939-1940; Assistant Resident in Medicine, Duke, 1940-1941; Assistant Resident in Pathology, Vanderbilt University School of Medicine, 1941-1942; First Assistant Resident in Medicine, Duke, 1942-1943; Resident Physician in Medicine, Duke, 1943-1944; Lt. (MC), USNR, 1944-1946; Private Practice in Internal Medicine, Rocky Mount, N. C., 1946; *Assistant Physician, Duke Hospital, 1947—*

JOHN W. ALLGOOD, B.S., M.D., *Instructor in Medicine.*

B.S., Emory Univ.; M.D., Emory Univ. Med. School, 1938; Intern, Grady Hosp., 1938-1939; Intern and Asst. Resident, Vanderbilt Hosp., 1940-1941; Resident in Medicine, Peter Bent Brigham Hosp., 1941-1942; U. S. Army Med. Corps, 1942-1946; General practice, 1946; *Instructor in Medicine, Duke Hospital, 1951—*

WOODROW BATTEN, B.S., M.D., *Instructor in Medicine.*

B.S., Wake Forest College; M.D., Bowman Gray School of Medicine, 1944; Intern, Duke, 1945-1946; Asst. Resident, Medicine, Duke, 1946-1947; Asst. Resident and Resident, North Carolina Baptist Hosp., 1947-1948; *Instructor in Medicine, Duke Hospital, 1951—*

EMMETT S. LUPION, B.S., M.D., *Instructor in Dermatology and Syphilology.*

B.S., Wake Forest, 1936; M.D., N. Y. U., 1938; Int. in Med., City Hosp., Winston-Salem, 1938, and Baptist Hosp., Louisville, 1938-39; Int. in Ped., Duke, 1939-40; *1952—*

CAVIN C. MITCHENER, A.B., M.D., *Instructor in Dermatology and Syphilology.*

A.B., U.N.C., 1945; M.D., U.N.C., 1949; Intern, Lankenau Hosp., Philadelphia, 1949-1950; U. of Pa. Grad. School, Med., 1950-1951; Asst. Res., Resident and Fellow in Dermatology and Syphilology, Duke, 1951—

EMIL BLAIR, M.D., *Instructor in Medicine.*

M.D., Medical Coll. of Ga., 1946; Int., rotating, Receiving Hosp., Detroit, 1946-1947; Res., Pathology, Univ. Hosp., New York, 1947-1948; Gen'l Practice, Savannah, 1948-1949; Asst. Res., Surgery, Baltimore City Hosp., 1949-1950; Res., Surgery, Baltimore City Hosp., 1950-1952; *Instructor in Medicine, Duke, 1952—*

EVELYN VAIL COONRAD, B.S., M.D., *Instructor in Medicine.*

B.S., Duke, 1945; M.D., Duke, 1948; Int., Pathology, Duke, 1949; Int., Med., Bowman Gray School of Med., Winston-Salem, 1949-1950; Asst. Res., Med., Bowman Gray School of Med., 1950; *Instructor in Medicine, Duke, 1952—*

BARBARA C. NEWBORG, A.B., M.D., *Instructor in Medicine.*

A.B., Swarthmore, 1941; M.D., Hopkins, 1949; Int., Med., Duke, 1949-1950; Asst. Res., Med., Duke, 1950-1952; *Instructor in Medicine, Duke, 1952—*

DONALD D. CARTER, M.D., *Instructor in Medicine.*

M.D., Duke, 1947; Int. and Asst. Res. in Med., Duke, 1948-52; *Instructor in Medicine and Fellow in Gastroenterology, 1952—*

JOHN DAVID CHARLTON, A.B., M.D., *Instructor in Medicine.*

A.B., McMaster Univ., 1937; M.D., Univ. of Western Ontario, 1942; Intern, Hamilton Gen. Hosp., Hamilton, Ontario, 1942-1943; Royal Canadian Air Force, 1943-1946; General Practice, Waterloo, Ontario, 1946-1952; *Instructor in Medicine, Duke, 1953—*

DANIEL L. DONOVAN, A.B., M.D., *Instructor in Medicine.*

A.B., Holy Cross College, 1945; M.D., Loyola, 1947; Intern, rotating, Presbyterian Hospital, Chicago, 1947-1948; Resident, Medicine, Presbyterian Hospital, Chicago, 1948-1949; Instructor, Medicine, Univ. of Ill., 1948-1950; J. B. Herrick Fellow, Cardiovascular Physiology, Presbyterian Hosp., Chicago, 1949-1950; Assistant Resident, Medicine, Grady Hosp., 1950-1951; U. S. Army Med. Corps., 1951-1953; *Instructor in Medicine, Duke, and Chief Resident, Medicine, V.A. Hosp., Durham, 1953—*

EDWARD H. ESTES, JR., B.S., M.D., *Instructor in Medicine.*

B.S., Emory, 1944; M.D., Emory, 1947; Intern, Medicine, Grady Hosp., 1947-1948; Fellow (Cardiology), Emory Univ., 1948-1949; Asst. Res., Medicine, Grady Hosp., 1949-1950; Med. Officer, U.S.N. (Cardiology) and Res. Asst., 1950-1952; *Asst. Res., Medicine, and Instructor in Medicine, Duke, 1953—*

PAUL G. FILLMORE, M.D., *Instructor in Medicine.*

M.D., Duke, 1946; Intern and Asst. Res., Medicine, Duke, 1947-1949; Atomic Energy Comm., Japan, 1949-1951; Fellow, Medicine, Duke, 1951-1952; Asst. Res., Resident in Medicine, Duke, 1952-1953.

NORMAN H. GARRETT, M.D., *Instructor in Medicine.*

M.D., Duke, 1950; Intern, Medicine, Duke, 1950; Intern, rotating, and Resident, Pathology, Cincinnati Gen. Hosp., 1950-1952; Asst. Res., Medicine, Duke, 1952-1953; *Instructor in Medicine, Duke, 1953—*

ROBERT GREKIN, A.B., M.D., *Instructor in Dermatology and Syphilology.*

A.B., Univ. of Mich., 1943; M.D., Univ. of Mich., 1945; Intern, Asst. Res., Resident, and Instructor, Dermatology, Univ. of Mich. Hosp., 1945-1949; Private Practice, Kalamazoo, 1949-1952; Sr. Asst. Surgeon, U.S.P.H.S., 1952-1953; *Instructor in Dermatology and Syphilology, Duke, 1953—*

CHARLES G. GUNN, B.S., M.D., *Instructor in Medicine.*

B.S., Davidson Coll., 1953; M.D., Duke, 1948; Intern, rotating, and Asst. Res., Medicine, Henry Ford Hosp., 1948-1950; U.S.N. Med. Officer, 1950-1952; Asst. Physician, Student Health, Davidson Coll., 1952-1953; *Instructor in Medicine, Duke, 1953—*

LADD W. HAMRICK, JR., B.S., M.D., *Instructor in Medicine.*

B.S., Wake Forest Coll., 1944; M.D., Bowman Gray, 1946; Intern, Medicine, Barnes Hosp., 1946-1947; Asst. Res., Pathology, Bowman Gray, 1947-1948; U. S. Army Med. Officer, 1948-1950; Asst. Res. and Fellow, Medicine, Duke, 1950-1953; *Instructor in Medicine, 1953—*

DAVID H. JOHNSTON, M.D., *Instructor in Medicine.*

M.D., Duke, 1951; Intern, Medicine, and Intern, Pathology, Grady Hosp., 1950-1952; Asst. Res., Medicine, V.A. Hosp., Atlanta, 1952-1953; *Instructor in Medicine, Duke, 1953—*

CLAUDE MCCLURE, B.S., M.D., *Instructor in Medicine and Assistant in Neurosurgery.*

B.S., Wake Forest Coll., 1947; M.D., Bowman Gray, 1950; Intern and Asst. Res., Surgery, Yale, 1950-1952; *Asst. Res., Neurosurgery, and Resident in Medicine (Neurology), Duke, 1952—*

HARRY T. McPIERSON, B.S., M.D., *Instructor in Medicine.*

B.S., Duke, 1944; M.D., Duke, 1948; Intern, rotating, Wisconsin Gen. Hosp., Madison, 1948-1949; Intern and Asst. Res., Medicine, Duke, 1949-1951; U. S. Army Med. Corps, 1951-1953; *Research Fellow, Resident and Instructor in Medicine, Duke, 1953—*

JOHN C. MULLER, B.S., M.D., *Instructor in Medicine.*

B.S., Citadel, 1948; M.D., Duke, 1948; Intern, Medicine, Grady Hosp., 1948-1949; Asst. Res., Med., 1949-1951, Duke; U. S. Army Med. Corps, 1951-1953; *Instructor in Medicine, Duke, 1953—*

CLIFFORD P. POWELL, A.B., M.D., *Instructor in Medicine.*

A.B., U. of Ala., 1926; M.D., Tulane, 1931; Intern, rotating, City Hosp., Macon, Ga., 1931; Intern, U. S. Naval Hosp., 1931-1933; Medical Officer, C.C.C., 1933-1936; U. S. Navy Med. Officer, 1936-1946; Postgraduate training, Medicine, Cornell, 1946-1947; U. S. Navy Med. Officer and Chief of Medicine, U. S. Naval Hosp., Jacksonville, 1947-1953; *Instructor in Medicine (Allergy), Duke, 1953—*

WILLIAM W. PRYOR, M.D., *Instructor in Medicine.*

M.D., Duke, 1947; Fellow, Raybrook Sanatorium, New York, 1947; Intern, Obs. and Gyn., Duke, 1947; Intern, Asst. Res. and Fellow, Medicine, Duke, 1947-1951; U. S. Air Force, Med. Corps, 1951-1953; Fellow, Medicine, Duke, 1953; *Instructor in Medicine, Duke, 1953—*

CHARLES L. RAST, JR., A.B., M.D., *Instructor in Medicine*

A.B., Washington & Lee U., 1943; M.D., Johns Hopkins, 1947; Intern, Medicine, Johns Hopkins, 1947-1948; Asst. Res., Medicine, Duke, 1948-1950; U. S. Army Med. Corps, 1950-1952; *Instructor in Medicine, Duke, 1952*—

GEORGE A. BISHOPRIC, M.D., *Instructor in Medicine.*

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JACK ROBBINS, M.D., *Instructor in Medicine.*

M.D., Duke, 1948; Intern, Medicine, Duke, 1949-1950; Asst. Res., Dermatology and Syphilology, Duke, 1950-1951; U. S. Army, 1951-1952; *Asst. Res. and Resident, Dermatology and Syphilology, Duke, 1952*—

JAMES R. TRIMBLE, A.B., M.D., *Instructor in Dermatology and Syphilology.*

A.B., Princeton, 1945; M.D., Coll. Phys. and Surg., 1947; Intern, St. Vincent's Hosp., Portland, Oregon; 1947-1948; Grad. Student, Dermatology, Columbia U., 1948-1949; Resident, Dermatology, Roosevelt Hosp., N. Y., 1949-1950; Fellow, Dermatology, Coll. Phys. and Surg., 1950-1951; U. S. Army Med. Corps, 1951-1953; *Instructor in Dermatology and Syphilology, Duke, 1953*—

P. W. SMITH, *Technical Associate in Clinical Microscopy.*PHYLLIS SCHOCK, *Technical Instructor in Clinical Microscopy.*

Medical Technician School, Duke, 1948; 1953—

ASSISTANTS IN MEDICINE

GEORGE ELI KOURY, A.B., M.D., *Assistant in Medicine.*

A.B., Univ. of North Carolina, 1941; M.D., Tulane, 1944; Intern, Rotating, Charity, New Orleans, 1944-1945; U. S. Army Medical Corps, 1945-1948; Asst. Res., Med., Tulane, 1948-1949; Instructor, Med., Tulane, 1949-1950; Private Practice, Internal Medicine, Burlington, N. C.; *Duke Hospital, 1950*—

AUDREY M. CONNOR, A.B., M.D., *Assistant in Medicine.*

A.B., Trinity Coll., Washington, D.C., 1945; M.D. George Washington U., 1950; Intern, Medicine, George Washington U. Hosp., 1950-1951; Asst. Res., Medicine, Gallinger Municipal Hosp., 1951-1952; Asst. Res., in Medicine, George Washington U. Hosp., 1952-1953; *Assistant in Medicine, Duke, 1953*—

ANASTASIOS DIMAS, M.D., *Assistant in Medicine.*

M.D., Med. School, Univ. of Athens, Greece, 1938; Asst., Sixth Univ. Hosp., Athens, 1938-1939; Army of Greece, 1939-1943; Private practice, Athens, 1943-1944; Assistant and Director, Laboratory of Hellenique Air Force Hosp., Athens, 1944-1952; *Voluntary Assistant, Medicine (Hematology), Duke, 1953*—

RUTH LOHMANN-PESCHEL, M.D., *Research Assistant in Medicine.*

M.D., Berlin, 1931; Int. in Medicine, Univ. Hosp., Berlin, 1930-1931; Vol. Asst. Phys., Univ. Hosp., Berlin, 1931-1933; Asst. Phys., Univ. Hosp., Berlin, 1933-1938; Dr. habil., Univ. Berlin, 1938; *Duke Hospital, 1947*—

CLOTILDE SCHLAYER, Ph.D., *Research Assistant in Medicine.*

Ph.D., Heidelberg, 1927; Voluntary Research Asst. in Cellular Physiol., University Hosp. of Berlin, 1933-1935; *Duke Hospital, 1937*—

FELLOWS

GEORGE W. CRANE, A.B., DePauw U., 1942; M.D., Northwestern U., 1945; Int., Dermatol. and Syphilol., U.S.P.H.S., 1946-1948; Fellow in Dermatology and Syphilology, Duke, 1949—

HENRY D. MCINTOSH, B.S., Davidson, 1943; M.D., U. of Pa., 1950; Int., Med., Duke, 1950-1951; Asst. Res., Med., Lawson V.A. Hosp., 1951-1952; Fellow in Medicine, Duke, 1952—

EMILE E. WERK, JR., A.B., Williams Coll. 1943; M.D., P. of Cincinnati Coll. of Med., 1946; Int. and Asst. Res., Med., Cincinnati General, 1946-1952; Fellow in Medicine, Duke, 1952—

MARY CAROLINE BECKER, A.B., Vanderbilt, 1946; M.D., Hopkins, 1950; Asst. Res., Medicine, Duke, 1952-1953; 1953—

JOHN A. CRAGO, B.A., U. of Fla., 1939; M.A., U. of Fla., 1940; M.D., Cornell, 1950; Intern, Med. and Surg., Mary I. Bassett Hosp., Cooperstown, N. Y., 1950-1951; Intern and Asst. Res., Medicine, Strong Mem. Hosp., Rochester; 1953—

MORTON BOGDONOFF, M.D., Cornell, 1948; Intern and Asst. Res., Medicine, New York Hosp., 1948-1950; Senior Asst. Surgeon, U.S.P.H.S., 1950-1952; Asst. Res., Medicine, Duke, 1953; 1953—

ERNEST B. PAGE, M.D., Duke, 1948; Intern, N.Y. State TB San., Raybrook, 1949; Research Asst., Medicine, Duke, 1949; Intern, Medicine, Royal Victoria Hosp., Montreal, 1949-1950; U.S.A.F. Med. Corps, 1950-1952; Asst. Res., Medicine, Duke, 1953; 1953—

SACHINDRANATH CHAUDHURI, M.D., Calcutta Med. Coll., India, 1944; Clinical training, Surgery, Med. Coll. Hosp. and Prince Ghulam Md. Hosp., Calcutta, 1944-1946; Research training, Allergy, Indian Inst. for Med. Research, Calcutta, 1947-1950; Assistant in Medicine, Duke, 1951-1953; 1953—

CHARLES D. COOPER, A.B., George Washington U., 1948; M.D., George Washington U., 1951; Intern and Asst. Res., Medicine, George Washington U. Hosp., 1951-1953; 1953—

GRADUATE STUDENTS (HOUSE STAFF)

Assistant Residents in Medicine 1953-1954

DAVID M. KIPNIS, A.B., Hopkins, 1945; M.A., Hopkins, 1947; M.D., U. of Md., 1951; Int., Med., Hopkins, 1951-1952; Med., Duke, 1952—

LEONARD M. LISTER, M.D., U. of Md., 1951; Int., Med., Barnes, 1951-1952; Duke, Med., 1952—

SETRAG A. ZACARIAN, B.S., Tufts, 1943; M.D., Boston U. Med. School, 1947; Int., rotating, Beverly Hosp., Mass., 1947-1948; Asst. Res., Med., Malden Hosp., Mass., 1948-1949; Teaching Fellow, Pathology, Tufts, 1949-1950; U.S.N., 1950-1952; Asst. Res., Med. (Derm. and Syphil.), Duke, 1952—

JEROME E. COHN, A.B., Johns Hopkins, 1943; M.D., U. of Md., 1946; Intern, Alameda Co. Hosp., Oakland, Calif., 1946-1947; Research Fellow, Medicine, Univ. Hosp., Baltimore, 1947-1948; U. S. Navy Med. Officer, 1949-1950; Asst. Res., Medicine, Univ. Hosp., Baltimore, 1950-1951; Research Fellow, Environmental Medicine, Johns Hopkins, 1951-1953; 1953—

HENRY L. IZLAR, JR., A.B., Duke, 1946; M.D., Duke, 1947; Intern, Raybrook San., N. Y., 1948; Intern, Medicine, Vanderbilt, 1948-1949; Asst. Res., Medicine, Bowman Gray, 1949-1950; Asst. Res., Medicine, Vanderbilt, 1950-1951; U. S. Navy Medical Corps, 1951-1953; 1953—

GERALD S. GORDON, M.D., Harvard, 1952; Intern, Medicine, Barnes Hosp., 1952-1953; 1953—

GEORGE A. KELSER, JR., B.S., Harvard, 1946; M.D., George Washington, 1949; Intern, Medicine, George Washington U. Hosp., 1949-1950; Asst. Res., Medicine, Gal-linger Municipal Hosp., 1950-1951; Research Fellow, Medicine, George Washington, 1951-1952; 1953—

AMOS H. LIEBERMAN, A.B., Columbia, 1948; M.D., Washington U., 1952; Intern, rotating, and Medicine, Mt. Sinai Hosp., 1952-1953; 1953—

ROBERT L. MCWHORTER, JR., M.D., Duke, 1947; Intern, Medicine, Grady Hosp., 1947-1948; Research Fellow, Physiology, Emory, 1948-1949; Asst. Res., Medicine, Grady Hosp., 1949-1950; Asst. Res., Medicine, Duke, 1950-1951; U.S. Army, 1951-1953; 1953—

MYRON R. MELAMED, B.S., Western Reserve U., 1946; M.D., Univ. of Cincinnati, 1950; Intern, rotating, and Asst. Res., Pathology, Cincinnati Gen. Hosp., 1950-1953; 1953—

GLENN E. MORTIMORE, B.S., Oregon State Coll., 1949; M.D., U. of Oregon, 1952; Intern, Medicine, Grady Hosp., 1952-1953; 1953—

HERSCHEL V. MURDAUGH, JR., M.D., Duke, 1950; Intern, Medicine, Grady Hosp., 1952-1953; 1953—

- SUYDAM OSTERHOUT, B.S., Duke, 1950; M.D., Duke, 1949; Intern, Pathology, Cleveland City Hosp., 1950; Intern, Medicine, Mass. Gen. Hosp., Boston, 1950-1951; U.S.A.F., M.C., 1951-1953; Instructor in Bacteriology and Asst. Res., Medicine, Duke, 1953—
- HERBERT O. SIEKER, M.D., Washington Univ., 1948; Intern, Asst. Res. and Research Fellow, Medicine, Duke, 1948-1950; U.S.A.F. Med. Corps, 1950-1953; Research Fellow, Medicine, Duke, 1953; 1953—
- CHARLES A. VANARSALL, A.B., U. of Louisville, 1946; M.D., Johns Hopkins, 1949; Intern, Medicine, Duke, 1949-1950; U.S. Navy, 1950-1952; 1953—
- RHETT P. WALKER, B.S., Univ. of Alabama, 1948; M.D., Med. Coll. of Alabama, 1952; Research Fellow, Medicine, Med. Coll. of Alabama, 1952-1953; 1953—
- BERNARD A. WANSKER, M.D., Duke, 1952; Intern, Watts Hosp., Durham, 1952-1953; Asst. Res., Dermatology and Syphilology, Duke, 1953—
- DONALD E. WARREN, M.D., Duke, 1952; Intern, Grady Hosp., 1952-1953; 1953—
- JOHN W. WILSON, JR., M.D., Duke, 1949; U.S. Navy Medical Officer, 1949-1952; Fellow in Medicine (Neurology), Duke, 1952-1953; Intern and Asst. Res., Medicine, Duke, 1953—
- ROBERT W. WILLETT, B.S., DUKE, 1948; M.D., Duke, 1948; Intern, Medicine, Duke, 1948; Intern, rotating, Syracuse U. Hosp., 1948-1949; Asst. Res. and Research Fellow, Medicine, Duke, 1950-1951; U.S. Army Med. Corps, 1951-1953; Research Fellow and Asst. Res., Medicine, Duke, 1953—
- JANET M. WOLTER, A.B., Cornell, 1946; M.D., U. of Illinois, 1950; Intern, rotating, and Fellow, Medicine, Presbyterian Hosp., Chicago, 1950-1952; Intern, Medicine, Johns Hopkins, 1952-1953; 1953—
- ALEXANDER H. WOODS, B.S., Harvard, 1948; M.D., Johns Hopkins, 1952; Intern, Medicine, Johns Hopkins, 1952-1953; 1953—

INTERNS

(1953-1954)

- RAYMOND APPEN, A.B., Duke, 1948; M.D., Duke, 1952; 1953—
- ROBERT AYERST, A.B., Duke, 1949; M.D., Duke, 1952; 1953—
- JAMES BACOS, B.S., Virginia Polytechnic Institute, 1948; M.D., Duke, 1953; 1953—
- MELVIN BERLIN, M.D., Duke, 1953; 1953—
- STUART BONDURANT, M.D., Duke, 1953; 1953—
- NEEDHAM CARTER, A.B., Duke, 1949; M.D., Duke, 1953; 1953—
- JOHN EAGAN, A.B., Johns Hopkins, 1949; M.D., Johns Hopkins, 1953; 1953—
- JOHN FLANAGAN, B.S., Virginia Polytechnic Institute, 1949; M.D., Duke, 1953; 1953—
- DENIS GIBLIN, B.Sc., McGill University, 1948; M.D., McGill, 1952; 1952-53, Intern (rotating), Royal Victoria Hosp., Montreal; 1953—
- WILLIAM GLEASON, M.D., Duke, 1952; 1953—
- TOMAS JONASSON, M.D., Univ. of Iceland, 1951; 1951-52, Intern (rotating) St. Joseph's Hosp., Reykjavik and Intern, Obs. & Gyn., University Hosp., Reykjavik; 1952-53, District Physician, Sudavik, Iceland; 1953—
- JAMES JONES, M.D., Univ. of Rochester, 1953; 1953—
- JOHN LORD, A.B., Harvard, 1947; M.D., Yale, 1953; 1953—
- GEORGE PARKERSON, JR., M.D., Duke, 1952; 1953—
- ELLISON PIERCE, JR., A.B., Univ. of Virginia, 1949; M.D., Duke, 1952; 1953—
- LAWRENCE POLLARD, JR., B.S., Univ. of South Carolina, 1948; M.D., Duke, 1953; 1953—

PAUL SEAVEY, A.B., Emory, 1949; M.D., Emory, 1953; 1953—

DELFORD STICKEL, A.B., Duke, 1949; M.D., Duke, 1953; 1953—

WILLIAM SUTTON, B.A., Stanford, 1950; M.D., Stanford, 1953; 1953—

ELDORA TERRELL, B.S., Guilford College, 1949; M.D., Duke, 1953; 1953—

THOMAS TERRELL, B.S., Guilford College, 1949; M.D., Duke, 1953; 1953—

ROBERT WELCH, A.B., Princeton, 1949; M.D., Johns Hopkins, 1953; 1953—

Introduction to Clinical Medicine and Physical Diagnosis. This course is initiated, in the fifth quarter, by introductory lectures, case discussions, and instruction in the methods of physical examination and history taking. Early in the course students begin work at the bedside in the examination of selected patients. Emphasis throughout is placed on instruction individually or in small groups. The interpretation and pathogenesis of all abnormal findings are stressed. The Departments of Neurology and Psychiatry provide training in neurological and mental examinations. This plan of teaching continues in the sixth quarter, when, in addition, instruction in the more specialized methods of examination is provided through the co-operation of the Departments of Surgery, Obstetrics, Gynecology, and Radiology.

Clinical Microscopy is given in the fifth quarter. The course includes the essentials of hematology and the examination of fresh material, such as urine, stools, spinal fluids, sputum, transudates, and exudates. The most important parasites of man are studied by the use of fresh and museum material. Second-year and senior students are given opportunities for special work and for investigation. This course is supplemented in the Junior and Senior years by Hematology Conferences, which are held weekly, and Ward Rounds, which are held three times weekly.

Cutaneous Medicine and Syphilology. Instruction consisting of lectures, seminars, the study and treatment of patients in the out-patient clinics, and on the wards is offered as an elective course.

Junior and Senior Medicine. The medical students are assigned to the medical wards as clinical clerks for three quarters of their time and to the medical out-patient department, where they examine patients, for the other part of their time.

Psychiatry

EWALD W. BUSSE, A.B., M.D., *Professor of Psychiatry and Chairman of the Department.*

A.B., Westminster College, 1938; M.D., Washington University, 1942; Int. Rotating, St. Louis City Hospital, 1942-1943; Major, MC, AUS, 1943-1946; Res. in Psychiatry, Univ. of Colorado Med. Center, 1946-1948; Instructor, Asst. Prof., Assoc. Prof., and Prof. of Psychiatry, Univ. of Colorado Sch. of Med., 1946-1953; *Psychiatrist, Duke Hospital, 1953—*

BINGHAM DAI, A.B., M.A., Ph.D., *Professor of Mental Hygiene and Psychotherapy.*

A.B., St. John's, 1923; M.A. and Ph.D., Chicago, 1932 and 1935; Fellow in Soc. Sc., Yale, 1932-1933; Instit. for Psychoanalysis, 1933-1935; Fell., Assoc. and Asst. Prof. in Med. Psych.; Peiping Union Med. Coll., China, 1935-1939; Lecturer in Soc., Tsin Hua, 1936-1937; Lecturer in Soc. Psych., Fisk, 1939-1942; 1943—

LESLIE BENJAMIN HOHMAN, A.B., M.D., *Professor of Psychiatry.*

A.B., Univ. of Missouri, 1912; M.D., Johns Hopkins, 1917; Int., Asst. Res. and Res., Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital, 1917-1922; U. S. Army, 1917-1919; Priv. Practice, 1922-1943; Associate in Psych., Johns Hopkins, 1922-1924; Lecturer in Psych., Univ. of Maryland, 1939-1943; Comdr., Med. Corps, U. S. Navy, 1943-1946; Asst. Prof. of Psych., Johns Hopkins, 1944-1946; *Psychiatrist, Duke Hospital, 1946—*

HANS LOWENBACH, M.D., *Professor of Psychiatry.*

M.D., Hamburg, 1930; Int., Med. Clinic, 1929-1930; and Asst. Physiolog. Inst., Freiburg i.B., 1930-1932; Asst. Med. Clinic, Köln, 1932-1933; Asst. Kaiser Wilhelm Inst. f. Hirnforschung, Physiolog. Abt., Berlin, 1933-1935; Fellow, Nansen Fund, Oslo, Norway, 1935-1936; Ship's Surg., Whaling Expeditions, 1936-1939; Res. Asst. in Psych., Johns Hopkins Med. Sch., 1939-1940; Lt. Col., MC, AUS, 1949-1951; *Psychiatrist Duke Hospital, 1940—*

JOSEPH B. PARKER, JR., B.S., M.D., *Associate Professor of Psychiatry.*

B.S., University of Tennessee, 1939; M.D., University of Tennessee, 1941; Gen. Rotating Internship, Gen. Hosp., Knoxville, Tenn., 1941-1942; Lt. Commander, USNR, MC, 1942-1946; Post Grad. Course and Residency in Psychiatry, St. Elizabeth's Hosp., Washington, D. C., 1944-1945; Resident in Psychiatry, Duke Hosp., 1946-1948; Instructor in Psychiatry, Duke Hosp., 1948-1949; Asst. and Assoc. Professor of Psychiatry, Univ. of Tennessee College of Med., 1949-1953; Chief of Psychiatric Service, V.A. Hospital, Durham, 1953—; *Assoc. Psychiatrist, Duke Hosp., 1953—*

R. CHARMAN CARROLL, R.N., A.B., M.D., *Assistant Professor of Psychiatry.*

R.N., Highland Hosp., 1930; A.B., Duke, 1935; M.D., Colorado, 1939; Int. in Ped., 1939-1940, and Res. in Psychiatry, Duke Hospital, 1940-1942; Assoc. in Psych., Highland Hospital, Asheville, N. C., 1942-1944; Assistant Psychiatrist, Duke Hospital, 1944; Med. Dir., Highland Hosp., Asheville, 1948—; Associate in Psychiatry, Duke Hospital, 1944-1952.

LOUIS DAVID COHEN, B.S., M.A., Ph.D., *Assistant Professor of Clinical Psychology, Assistant Professor of Psychology.*

B.S., Brooklyn, 1934; M.A., Columbia, 1936; Ph.D., Duke, 1949; Grad. Student, Psychology, N. Y. University, 1938-1940; Lt. Col., U. S. Army, 1942-1946; Assoc. in Clinical Psychology, Duke, 1946-1949; Asst. Prof. of Psychology, Duke, 1949; *Assistant Professor of Clinical Psychology, Duke Hospital, 1946—*

JOHN A. FOWLER, B.S., M.D., *Assistant Professor of Psychiatry.*

B.S., Wake Forest, 1943; M.D., Bowman Gray School of Med., 1946; Int. Rotating, U. S. Naval Hosp., 1946-1947; Lt. j.g., MC, USNR, 1947-1949; Res. in Psychiatry, Univ. of Colorado, 1949-1952; Clinical Psychiatrist, Connecticut Bureau of Mental Hygiene, 1952-1953; *Director, Durham Child Guidance Clinic, 1953—*

GEORGE A. SILVER, B.S., M.D., *Assistant Professor of Psychiatry.*

B.S., Guilford, 1934; M.D., Duke, 1938; Int., Ped., Duke, 1937-1938; Rotat. Int., St. Francis Hosp., Trenton, N. J., 1938-1939; Int., Obs., Marz. Hague Hosp., Jersey City, N. J., 1939; Gen. Practice, N. J., 1939-1941; Lt. Col. (Flight Surgeon), U. S. Army, March 1941-1946; Veteran Resident in Psychiatry, Duke Hospital, 1946-1947; Instructor in Psychiatry, Duke Hospital, 1948-June 1949; *Assistant Psychiatrist, Duke Hospital, 1949—*

ROBERT BURKE SUITT, M.D., *Assistant Professor of Psychiatry.*

M.D., St. Louis, 1932; Int., Neuropsychiatric Serv., Alexian Bros. Hosp., St. Louis, 1931-1932; Int., St. Louis City Hosp., 1932-1933; Res. in Psychiatry, Highland Hosp., Asheville, N. C., 1933-1938; Asst. in Psychiatry, Johns Hopkins Med. Sch., 1938-1940; Asst. Dispen. Psych., Johns Hopkins Hosp., 1939-1940; *Assistant Psychiatrist, Duke Hospital, 1940—*

ROBERT H. BARNES, B.S., M.D., *Associate in Psychiatry.*

B.S., Union Coll., Schenectady, N. Y., 1943; M.D., Duke, 1947; Int. Rotating, Colorado Gen. Hosp., 1948-1949; Res. in Psychiatry, Univ. of Colorado, 1949-1952; Instructor, Psychosom. Med., Univ. of Colorado Med. Center, 1952-1953; *Associate in Psychiatry, Duke Hospital, 1953—*

ROBERT LAWRENCE CRAIG, B.A., M.D., *Associate in Psychiatry.*

B.A., Amherst College, 1931; M.D., Johns Hopkins, 1935; Int. Med., Baltimore City Hosps., 1935-1936; Asst. Res., Med., Baltimore City Hosps., 1936-1937; Asst. Res., Neurology, Baltimore City Hosps., 1937-1938; Res. Neurology, Duke, 1938-1939; Res., Psychiatry, V.A. Mental Hygiene Clinic, Duke, 1948; Instructor in Neurology, Duke, and Asst. Neurologist, Duke, 1939-1942 and 1946-1947; Instructor in Psychiatry, Duke Hosp., 1949; Associate Med. Dir., Highland Hosp., Asheville, N. C., 1949; *Associate in Psychiatry, Duke Hospital, 1948—*

MARSHALL L. FISHER, B.S., M.D., *Associate in Psychiatry.*

B.S., Univ. of Illinois, 1932; M.D., Univ. of Ill. Coll. of Med., 1935; Int. Rotating, County Hosp., Chicago, 1936-1937; Res. and Assoc. Physician Psych., Mateno State Hosp., Mateno, Ill., 1937-1938; Private Practice, 1938-1942; U. S. Army, 1942-1946; Private Practice, San Diego, Calif., 1947-1948; Director Psychiatric Education, Veterans Hospital, Roanoke, Va.; 1949-1951; Director, Mental Hygiene Clinic, Charlotte, N. C., 1951—; *Associate in Psychiatry, Duke Hospital, 1949—*

JEWETT GOLDSMITH, A.B., M.D., Associate in Psychiatry.

A.B., Johns Hopkins Univ., 1938; M.D., Univ. of Maryland School of Med., 1942; Int., Kings County Hosp., Brooklyn, N. Y., 1942-1943; Lieut., U. S. Navy, 1943-1946; V.A. Senior Res. in Psych., Duke Hospital, 1946-1948; Instructor in Psychiatry, Duke Hospital, Jan. 1949-June 1949; Physician-in-charge, Psychiatric O.P.C., Duke Hospital, July 1950; *Associate in Psychiatry, Duke Hospital, July 1949—*

JOHN B. K. SMITH, M.B., Ch.B., M.D., Associate in Psychiatry.

M.B., Ch.B., Glasgow Univ., 1931; M.D., Glasgow, 1944; H.S., Gen. Surg., 6 mos., II.S., E.N.T., 6 mos., Glasgow Royal Infirm.; Surg. Reg., Darlington Gen. Hosp., 1931-32; Asst. Surg., Skipton and District Gen. Hosp., Asst. Phys., Skipton and District Fever Hosp., 1933; Vis. Surg., Alderley Edge Hosp., 1934-39; Surg. Lt. Com., Royal Navy, 1939-42; Deputy Med. Supt., Dykebar Mental Hosp., Paisley, Renfrewshire, 1942-45; Vis. Surg., Meigle Hosp., 1945-46; Asst. Surg., Glasgow Royal Infirm., 1946; Boarding Med. Officer, Ministry of Pensions, Glasgow, Psychiat. and Surg., Bellsdyke Mental Hosp., Vis. Psychiat. and Neurosurg., Stirling and District Royal Infirm., and Falkirk and District Royal Infirm., 1946-51; Cert. Psychiat. and Neurosurg., National Health Service, 1948-51; Psychiat. and Psychosurg., Saskatchewan Hosp., Sask., Can., 1951, and State Hosp., Raleigh, N. C., 1952-1953; Clin. Dir., Edgewood Fdn. San., 3 mos., 1953; Associate Psychiatrist, Highland Hosp., 1953—; *Associate Psychiatrist, Duke, 1953—*

SANFORD GOLDSTONE, B.S., Ph.D., Lecturer in Psychology and Associate in Clinical Psychology.

B.S., C.C.N.Y., 1947; Ph.D., Duke University, 1953; Int. Duke Hosp., 1949-1950; Clinical Psychologist, Psychosomatic Med. Clinic, Duke Hosp., 1950-1951; Clinical Psychologist, Out-Patient Psych. Clinic, Duke Hosp., 1951-1953; *Associate in Clinical Psychology, Duke Hospital, 1953—*

EDWARD ELLSWORTH JONES, A.B., Ph.D., Assistant Professor of Psychology and Associate in Clinical Psychology.

A.B., Harvard Coll., 1949; Ph.D., Harvard Univ., 1953; Teaching Fellow, Harvard, 1950-1951; Tech. Asst. to O.N.R. Human Relations Panel, 1950-1951; Int. in Psychology (Battletoro Retreat), 1951; Research Asst., Harvard, 1951-1953; *Associate in Clinical Psychology, Duke Hospital, 1953—*

WILLIAM P. WILSON, B.S., M.D., Associate in Psychiatry, Chief Resident in Psychiatry.

B.S., Duke, 1943; M.D., Duke, 1947; Int., Rotating, Gorgas Hosp., Ancon, C.Z., 1947-1948; Staff Physician, State Hosp., Raleigh, 1948-1949; Instructor in Psychiatry, Duke Hospital, 1949-52; *Associate in Psychiatry, Duke Hospital, 1952—*

GEORGE REID ANDREWS, A.B., M.A., M.D., Instructor in Psychiatry.

A.B., Dartmouth Coll., 1937; M.A., Yale Univ., 1942; M.D., Duke, 1948; Int., U.S. Marine Hosp., Seattle, Wash., 1948-1949; Res. in Psychiatry, Yale, 1949-1952; Director, Mental Hygiene Clinic, Hartford Hosp., 1952-1953; *Instructor in Psychiatry, Duke Hospital, 1953—*

MARIE BALDWIN, A.B., M.D., Instructor in Psychiatry.

A.B., Erskine College, 1924; M.D., South Carolina State Med. Coll., 1929; Int. Gen., Parkview Hosp., Rocky Mount, N. C., 1929-1930; Int. Ped., Buffalo Children's Hosp., Buffalo, N. Y., 1930-1931; Res. Med. Overlook Hosp., Summit, N. J., 1931-1932; Asst. Res. Psych., Duke, 1944-1945; Res. Psych., Duke, 1945-1946; Fellowship, Charlotte Mental Hygiene Clinic, 1945-1946; Senior Asst., Highland Hospital, Asheville, N. C., 1946-1949; Assoc. Psychiatrist, Highland Hosp., Asheville, N. C., 1949—; *Instructor in Psychiatry, Duke Hospital, 1949—*

MICHAEL J. KEITH, M.B., B.S., Instructor in Psychiatry.

M.B., B.S., St. Thomas' Hosp. Med. Sch., Univ. of London, 1951; Int., rot., Mercer Hosp., Trenton, N. J. and St. Vincent's Hosp., Toledo, Ohio, 1951-52; Asst. Phys., Eastern State Hosp., Williamsburg, Va., 1952-53; Asst. Psychiatrist, Highland Hospital, 1953—; *Assistant Psychiatrist, Duke, 1953—*

ALBERT J. SILVERMAN, B.Sc., M.D.C.M., Instructor in Psychiatry.

B.Sc., McGill Univ., 1947; M.D.C.M., McGill Univ., 1949; Gen. Rotating Internship, Jewish Gen. Hosp., Montreal, Canada, 1949-1950; Resident in Psychiatry, Univ. of Colorado Med. Center, 1950-1953; *Instructor in Psychiatry, Duke Hosp., Nov. 1953—*

DAVID A. YOUNG, A.B., M.D., Lecturer in Psychiatry.

A.B., North Carolina, 1928; M.D., Harvard, 1931; Int., Med., Mass. Gen. Hosp., 1931-1933; Int. and Res. in Neurol., Bellevue Hosp., 1933; Int., Psych., Worcester State Hosp., 1934; Res., Psych., McLean Hosp., Waverly, Mass., 1934; Senior Physician, McLean Hosp., 1936-1941; Asst. Res. Psych., Duke, 1935; Res. in Psych., Mass. Gen. Hosp., 1935-1936; Lecturer in Medicine, Univ. of N. C., 1946; 1946—

D. K. ADAMS, Consultant. Professor of Psychiatry.**JOHN GILLIN, Consultant. Professor of Anthropology, Univ. of N. C.****WESTON LABARRE, Consultant. Associate Professor of Anthropology.****FLORRIE GARRETT, Psychologist.****A. A. FOSTER, Technical Instructor in Psychiatry.**

GRADUATE STUDENTS (HOUSE STAFF)

ROBERT H. DOVENMUEHLE, A.B., Valparaiso Univ., 1944; M.D., St. Louis Univ., 1948.

PHILIP E. KUBZANSKY, B.S.S., C.C.N.Y., 1950.

FINN MAGNUSSEN, Maturum, Gymnasium, 1944; cand. med., Univ. of Oslo (Norway) Med. School, 1952.

MARTA M. PRUCE, Maturum, Real-Gymnasium, Vienna (Austria), 1923; M.D., Univ. of Vienna Med. School, 1937.

ANNE ELIZABETH SAGBERG, Maturum, 1937; cand. med., Univ. of Oslo (Norway) Med. School, 1947.

Instruction starts in the first year with an introductory course in psychiatry. In the second year, methods of psychiatric examination and a general presentation of the main reaction types are given. Each third-year student has a two-week clerkship on the psychiatric ward, and in the fourth year patients are worked up in the out-patient clinic for a period of three and half weeks. A psychiatric amphitheater clinic is held weekly throughout the year for third- and fourth-year students. Elective courses in psychiatric methods of research, physiological aspects of psychiatry, psychosomatic medicine, psychoanalysis in medicine, and principles of psychotherapy are offered to fourth-year students. Students are invited to attend the staff case conferences, the psychosomatic conferences and the conferences on psychiatric disorders of childhood. Emphasis is placed upon the close relationship of psychiatry to other branches of medicine and the social sciences. Internships are available in psychiatry with the expectation that they will lead to progressively greater interest in psychiatric problems encountered on all other services in the Hospital. Graduate training in psychiatry meeting the requirements of the American Board of Psychiatry and Neurology is given. Regular courses in conjunction with the Veterans Administration Hospital training program are available. Investigation is encouraged.

Surgery

DERYL HART, A.B., A.M., M.D., *Professor of Surgery and Chairman of the Department.*

A.B. and A.M., Emory, 1916 and 1917; M.D., Johns Hopkins, 1921; Int. in Surg., Asst. Res. in Surg. Path., Asst. Res. and Res. in Surg., and Assoc. Surg., Johns Hopkins Hosp., 1921-1930; Asst. in Path., Instr., and Assoc. in Surg., Johns Hopkins Med. Sch., 1922-1930; *Surgeon, Duke Hospital, 1930—*

CLARENCE ELLSWORTH GARDNER, JR., A.B., D.Sc., M.D., *Professor of Surgery.*

A.B., D.Sc., Wittenberg, 1924, 1951; M.D., Johns Hopkins, 1928; Int. and Asst. Res., Johns Hopkins Hosp., 1928-1930; Asst. in Surg., Johns Hopkins Med. Sch., 1929-1930; Res. in Surgery and Associate Surgeon, Duke Hosp., 1930-1942; Col., Chief of Surg. Serv., 65th (U. S.) Gen. Hosp., 1942-1945; *Associate Surgeon, Duke Hospital, 1945—*

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B.A. and B.S., North Dakota, 1930 and 1931; M.D., Rush Med. Coll., 1933; Int., Presbyterian Hosp., Chicago, 1933-1935; Asst. Res., Res. and Instr. in Surg., Chicago, 1935-1942; *Assistant Surgeon, Duke Hospital, 1942—*

KENNETH LEROY PICKRELL, M.D., *Professor of Plastic Surgery.*

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GUY LEARY ODOM, M.D., *Professor of Neurosurgery.*

M.D., Tulane, 1933; Int., Rotat., East Louisiana State Hosp., 1934-1937; Res. Fellow, Path. Fellow, Int. and Res. in Neuro. and Neurosurg., Montreal Neurol. Instit., 1937-1942; Clin. Instr. in Neurosurg., L. S. U. Med. Sch., 1942-1943; *Assistant Neurosurgeon, Duke Hospital, 1943—*

WILLIAM BANKS ANDERSON, A.B., M.D., *Professor of Ophthalmology.*

A.B., North Carolina, 1920; M.D., Johns Hopkins, 1924; Int., Union Mem. Hosp., Balto., 1924-1925; Int., Mass. Eye and Ear Infirmary, 1925-1927; *Ophthalmologist, Duke Hospital, 1930—*

WATT WEEMS EAGLE, A.B., M.D., *Professor of Otolaryngology.*

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EDWIN PASCAL ALYEA, S.B., M.D., *Professor of Urology.*

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- RODERICK ORMANDY, B.A., M.A., Ph.D., *Associate Professor of Medical Speech Pathology*.
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- DOROTHY WATERS BEARD, R.N., *Associate in Surgery*.
R.N., Vanderbilt, 1929; Supervisor, Surg. Service, Vanderbilt Univ. Hosp., 1929-1931; Post-graduate Course in Surg., Charity Hosp., New Orleans, 1931-1932; 1938—

- HERMAN MAX SCHIEBEL, A.B., M.D., *Associate in Surgery*.
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- THEODORE W. ATWOOD, A.B., D.M.D., *Associate in Dentistry*.
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- NORMAN F. ROSS, D.D.S., *Associate in Dentistry*.
D.D.S., Temple, 1937; Int. in Dentistry, Duke Hosp., 1937-1938; Major, U. S. Army Med. Corps, 1942-1946; *Assistant Dentist, Duke Hospital, 1938—*
- LEE J. CORDREY, M.D., *Associate in Orthopaedics and Chief, Orthopaedic Section, V.A. Hospital*.
M.D., Temple, 1945; Int., Med. Center, Jersey City, 1945-46; U. S. Army, Orthopaedic Service, 1946-48; Res., Lawson V.A. Hosp. and Emory Univ. Med. Sch., 1948-51; Res., Shriner's Hosp. and Temple Univ. Hosp., 1952-53; *Associate in Orthopaedics and Chief, Orthopaedic Section, V.A., Hosp., Durham, N. C., 1953—*
- HELEN ELIZABETH HALL, M.D., *Associate in Anesthesiology and Assistant Chief of Anesthesiology, V.A. Hospital, Durham, N. C.*
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- FRANCIS WYNNE MASTERS, M.D., *Associate in Plastic Surgery*.
M.D., Univ. Rochester, 1945; Int., Surg., Strong Mem. Hosp., 1945-46; Capt., U. S. Army, M.C., 1946-48; Asst. Res., Res., Surg., Strong Mem. Hosp., 1948-51; Asst. Res., Res., Plas. Surg., Duke, 1951-53; *Assoc., Plas. Surg., Duke, 1953—*
- BRYON M. BLOOR, B.S., M.D., *Associate in Neurosurgery and Chief of Neurosurgery, V.A. Hospital, Durham, N. C.*
B.S., Univ. of Idaho, 1942; M.D., Duke, 1945; Int., Surg., Duke, 1945-46; U. S. Navy, M. C., 1946-48; Res., Neurol. U.S.V.A. Hosp., Louisville, Ky., 1948-49; Asst., Med., Section of Neurol., Louisville Gen. Hosp., Louisville Sch. Med., 1948-49; Asst. Res., Neurosurg., Duke, 1949-50; Asst. Res. Neurosurgery and Damon Runyon Res. Fellow, 1950-52; Res., Neurosurg., Duke, 1952-53; *Chief, Neurosurgical Service, V.A. Hospital, Durham, N. C., 1953—*
- ALFRED N. COSTNER, B.S., M.D., *Associate in Ophthalmology*.
B.S., Univ. of N. C., 1940; M.D., Washington Univ., 1943; Int., Norfolk Gen. Hosp., 1944; Int., Ophth. and Otol., Duke, 1944-1945; Capt., U. S. Army, M.C., 1945-1947; Asst. Res. and Res., Ophth. and Otol., Duke, 1947-1949; Grad. Stud., Harvard Postgrad. Med. Sch., 1949-1950; Res., Instr. and Assoc., *Ophthalmology and Otolaryngology, Duke Hospital, 1950—*
- SAMUEL DACE MCPHERSON, JR., *Associate in Ophthalmology*.
A.B., U. N. C., 1940; M.D., Johns Hopkins, 1943; Int., Asst. Res. and Res., Ophthal., Wilmer Inst., 1943-48; Lt. (j.g.), Navy, 1946; *McPherson Hosp., 1948—*
- GEORGE BURTON FERGUSON, M.D., M.Sc. (Med.), *Associate in Bronchoscopy*.
M.D., Jefferson, 1932; M.Sc. (Med.), Pennsylvania, 1936; Res. Phys., Jefferson Med. Coll. Hosp., 1932-1934; *Bronchoscopist, Duke Hospital, 1937—*
- EDWARD A. ECKERT, B.A., M.S., Ph.D., *Research Associate in Experimental Surgery and Instructor in Bacteriology*.
B.A., Brooklyn Coll., 1941; M.S., Mass. Inst. of Tech., 1948; Ph.D., Duke, 1951; *Scholar in Cancer Research of American Cancer Society, 1952—*
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- ROBERT L. BENNETT, M.D., *Lecturer in Physical Medicine*.
B.S., U. of Pittsburgh, 1934; M.D., 1936; M.S. in Physical Med., Mayo Foundation, U. of Minnesota, 1941; Int., Mercy Hosp., 1936-1937; Fellow in Phys. Med., Mayo Foundation, 1937-1940; Asst. Phys. Med., Mayo Clinic, 1939-1940; Asst. Prof. Phys. Med., Georgia Warm Springs Foundation; Dir. Post-Graduate School, Georgia Warm Springs Foundation, 1941-1946; *1946—*

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CARMINE KEITH LYONS, M.D., *Instructor in Surgery.*

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EUGENE J. LINBERG, A.B., M.D., *Instructor in Surgery.*

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GORDON MALONE CARVER, JR., B.A., M.D., *Instructor in Surgery.*

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B.S. and M.D., Duke, 1948; Int., Exp. Surg., Duke, 1947-48; Int., Surg., Duke, 1948-49; Asst. Res., Surg., Duke, 1949-50; U. S. Army, M.C., 1950-1952; Asst. Res., Surg., Duke, 1953—

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BLAKE FAWCETT, A.B., M.D., *Instructor in Surgery.*

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JAMES B. GOLDEN, A.B., M.D., *Instructor in Neurosurgery.*

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EVERETT I. BUGG, JR., M.D., *Instructor in Orthopaedics.*

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A.B., Duke, 1939; M.D., Cornell, 1943; Int. in Surg., N. Y. Hosp., 1943; U. S. Army Med. Corps, 1944-46; Ext. in Path., N. Y. Hosp., 1946-47; Asst. Res. in Surg., N. Y. Hosp., 1947-49; Asst. Res. in Orthopaedics, N. Y. Hosp., 1949-50; Asst. Res. and Res. in Orthopaedics, Shriner's Hosp., Greenville, S. C., 1950-51; *1952—*

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B.S., Washington and Lee, 1940; M.D., Duke, 1949; Rot. Int., Brooke Gen. Hosp., U.S.A.M.C., 1949-50; *Int., Asst. Res. and Res., Duke (EENT), 1950—*

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B.S., Wofford, 1941; M.D., Bowman Gray, 1943; Int., Surg., Grady Hosp., 1944; 1st Lt., Army, 1944-46; Int., Asst. Res. and Res., Ophthal., Duke, 1948-51; *1952—*

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Fordham Univ., 1937-40; D.D.S., Columbia Univ., 1944; Int., Oral Surg., Kings Co. Hosp., 1944; U. S. Army, Dental Corps, 1944-46; B.S., M.D., Duke, 1949; Int., Surg., Duke, 1949-50; Asst. Res., Gen. Surg., Duke, 1941-52; Asst. Res., Plastic Surg., Duke, 1952-53; Res., Plastic Surg., Duke, 1953—; Assoc. in Oral Surg., 1952—; *Instr., Plastic Surg., Duke, 1953—*

SAMUEL SHERIDAN AMBROSE, JR., A.B., M.D., *Instructor in Urology.*

A.B., M.D., Duke, 1944 and 1947; Int., Surg., Duke, 1947-48; Instr., Physio., Duke, Mar.-June 1947; Asst. Res., Urol., Duke, 1948-50; U.S.N., M.C., 1950-52; *Res., Urol., Duke, 1953—*

CHESTER R. TAYLOR, *Technical Associate in Surgery.***WILLIAM J. THOMAS, *Technical Instructor in Surgery.*****BERT R. TITUS, *Technical Associate in Orthosis.*****ASSISTANTS, RESIDENTS AND ASSISTANT RESIDENTS****FRANCIS G. HORNE, B.S., M.D., *Assistant in Anesthesiology.***

B.S., M.D., Duke, 1949 and 1951; Int., Anes., Duke, 1951; Int., Brooke Army Hosp., U.S.A.M.C., 1951-53; *Asst. Res., Duke, 1953—*

MARVIN A. BOWERS, JR., A.B., M.D., *Assistant in Anesthesiology.*

A.B., Lenoir Rhyne Coll., 1944, U.S.N., 1944-46; Cert. Med., Univ. N. C., 1948; M.D., Univ. of Louisville, 1950; Int., Ped. and Ob., Duke and Watts, 1950-51; Asst. Res., Anes., Duke, 1951-53; *Res., Anes., Duke, 1953—*

VENUGOPAL RAMACHANDRA, L.M.P., M.B., B.S., *Assistant in Anesthesiology.*

L.M.P., Med. Sch., Bangalore, India, 1943; M.B. and B.S., Univ. Med. Coll., Mysore, India, 1948; House Surg., Int., Med., Bangalore Victoria Hosp., 1948-1950; House Surg., EENT, Bangalore Victoria Hosp., 1950; Asst. Surg., Surg., Bangalore Victoria Hosp., 1950-52; Asst. Res., Anes., Baroness Erlanger Hosp., Chattanooga, Tenn., 1952-1953; *Asst. Res., Anes., Duke, 1953—*

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M.D., Med. Coll. So. Carolina, 1945; Rot. Int., Greenville Gen. Hosp., 1945-46; Priv. Prac., 1946-53; *Asst. Res., Anes., Duke, 1953—*

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M.D., Sch. Med., Havana Univ., Havana, Cuba, 1949; Int., Hosp. Universitario Calixto Garcia, Havana, Cuba; Clínica de la Asociación de Dependientes, Havana, Cuba; Int., Rot., St. Mary's Hosp., Ill., 1952-53; *Asst. Res., Anes., Duke, 1953*—

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M.B.B.Ch., D.S., Kasr El-Eini Med. Sch., Fouad 1st Univ., Cairo, Egypt, 1949 and 1953; House Surgeon, Kasr El-Eini Hosp., Fouad 1st Hosp. and Children's Hosp., Cairo, 1949-50; Res., Kasr El-Eini Hosp., 1950-51; Fulbright-Smith-Mundt Scholarship as Fellow, Univ. Hosp., Akr. Med. Sch., Mayo Clinic and Mem. Center for Cancer, 1951-52; Res., Kafir El-Dawar Gen. Hosp., 1952-53; *Asst. Res., Surg., Duke, 1953*—

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B.A., M.D., Univ. Va., 1948 and 1952; Int., Surg., Johns Hopkins Hosp., 1952-53; *Asst. Res., Surg., Duke, 1953*—

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WILLIAM GLENN YOUNG, JR., M.D., Assistant in Surgery.

M.D., Duke, 1948; Int., Surg., Duke, 1948-49; Res. Fell., Surg., Duke, 1949-50; Asst. Res., Surg., Duke, 1950; U.S.N.M.C., 1951-53; *Asst. Res., Surg., Duke, 1953*—

MARIUS HUGHEY WELLS, B.S., M.D., Assistant in Surgery.

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ROBERT BENSON TRUMBO, A.B., Assistant in Surgery.

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B.S., Davidson, 1943; M.D., Vanderbilt, 1947; Rot., Int., Roper Hosp., 1947-48; Staff Phys., Davidson Co. The. Hosp., 1948-1949; Staff Phys., S.C. Sanatorium State Park, 1949-1950; U.S.A.F.M.C., 1950—; *Asst. Res., Surg., Duke, 1953*—

CHARLES E. HORTON, A.B., B.S., M.D., Assistant in Plastic Surgery.

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HUGH CRAWFORD, M.D., Assistant in Plastic Surgery.

Southwestern Coll., 1942-43; Univ. of South—Sewanee, 1943-44; M.D., Univ. Tenn. Sch. Med., 1947; Int., Rot., John Gaston Hosp., 1947-49; Asst. Res., Anes., Presbyterian Hosp., N.Y.C., 1948-49; Asst. Res., Surg., St. Thomas Hosp., 1949-50; U.S.N., M. C., 1951-53; Asst. Res., Surg., Vanderbilt Hosp., 1953; *Asst. Res., Plastic Surg., Duke, 1953*—

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JEROME M. JAVIER, M.D., *Assistant in Neurosurgery.*

M.D., Duke, 1947; F.M. Hanes Fellow, Neurosurg. Lab. Clin., Duke, 1947-48; Int., Surg., Duke, 1948-49; Int., Neurosurg., Duke, 1949-50; Res., Neuro., Duke, 1950; Staff Neurosurgeon, Asst. Chief, Neurosurg. Service, Letterman Army Hosp., 1950-52; Fellow, Neurosurg. Lab., Duke, 1953; *Asst. Res., Neurosurg., Duke, 1953—*

DAVID H. REYNOLDS, M.D., *Assistant in Neurosurgery.*

Ohio State Univ., 1938-40; U.S.A.M.C., 1941-45; Ohio State Univ., 1945-47; M.D., Duke, 1951; Int., Med., St. Joseph's Hosp., 1951; Int., Surg., Grady Mem. Hosp., 1951-52; *Asst. Res., Med. and Neuro., Duke, 1952—*

CLAUDE MCCLURE, B.S., M.D., *Assistant in Neurosurgery.*

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A.B., Duke, 1947; M.D., Univ. Ga., 1952; Rot., Int., Wisc. Gen. Hosp., 1952-53; *Asst. Res., EENT, Duke, 1953—*

ANTONIO BERRIOS, M.D., *Assistant in Orthopaedics.*

M.D., Univ. San Carlos de Guatemala, 1949; *Trainee, Orth., Duke, 1950—*

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B.S., Tufts Coll., 1940; M.D., Harvard, 1943; Surg., House-staff, East Surg. Serv., Mass. Gen. Hosp., 1944; Jr. Asst. Res., Mass. Gen. Hosp., 1944-45; U.S.N., M.C., 1945-46; Res., Surg., Cushing V.A. Hosp., 1946-47; Gen. Prac., Med., Sharon, Mass., 1947-50; U.S.N., 1950—, LCDR; *Asst. Res., Ga. Warm Spps. Fdtn., 1953—*

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A.B., Coll. of Wooster, 1939; M.D., Western Res., 1942; U.S.N., M.C., 1943—; *Asst. Res., Orth., N. C. Orth. Hosp., 1953—*

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B.S., Clemson Coll., 1942; M.D., Med. Coll. of S.C., 1945; Int., Rot., Roper Hosp., 1945-46; Asst. Res., Orth. Surg., Oliver Gen. Hosp., 1949-50; Res., Orth. Surg., Brooke Army Hosp., 1950-51; Asst. Surg. and Res., Shriners Hosp. for Crippled Children, 1952; Int., Path., Duke, 1953; *Asst. Res., Orth., Duke, 1953—*

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B.S., Univ. Vermont, 1944; M.D., Univ. Vermont, 1946; Int., Johns Hopkins, 1946-47; Fellow, Univ. Vermont, 1947-48; U.S.A.M.C., 1948-50; *Asst. Res., Urol., Duke, 1950—*

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FELLOWS

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ARTHUR PROCTER HUSTEAD, M.D., *Fellow in Surgery.*
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B.S., M.D., Universidad de San Marcos, 1950; Rot., Int., Harmon Hosp., Houston, Tex. and Providence Hosp., Waco, Tex., 1950-51; Int., Path., Duke, 1951-52; Int., Surg., Duke, 1952-53; *Cardio-vascular Training Fellow, Duke, 1953—*

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INTERNS

(General Surgery)

ANTONE KHADER TARAZI, Arab Coll., Jerusalem, 1945; M.D., American Univ., Beirut, 1952.

CORNELIUS TRAWICK McDONALD, A.B., Univ. of N.C., 1949; M.D., Med. Coll. of Ga., 1953.

HARRY SCOTT THOMSON, B.A., Univ. Saskatchewan, 1948; M.D., C.M., McGill, 1952.

FRANCISCO ARANGO, B.S., M.D., Univ. of Antioquia, Medellin, Colombia, S.A., 1944 and 1952.

WILLIAM DAVIE LYDAY, M.D., Duke, 1953.

JOHN RAYMOND CHITTUM, M.D., Duke, 1953.

GEORGE ROBERT NUGENT, A.B., Kenyon Coll., 1949; M.D., Univ. Cincinnati, 1953.

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EDWARD WARREN TAYLOR, JR., B.S., Wake Forest Coll., 1950; M.D., Bowman Gray Sch. of Med., 1953.

R. M. BRIDGES, M.D., Duke, 1953.

JESSE L. WILLIAMS, M.D., Duke, 1953.

(Ophthalmology and Otolaryngology)

BAXTER HAYES BYERLY, A.B., Univ. of N.C., 1949; M.D., Med. Coll. Va., 1953.

DONALD REID KERNODLE, A.B., Elon Coll., 1949; M.D., Duke, 1953.

RICHARD BRANDON RANKIN, JR., M.D., Duke, 1953.

(Oral Surgery)

ANTON HEJL, B.S., Adelbert Coll., 1949; D.D.S., Western Res. Univ., 1953.

MIGUEL SZNOL, D.D.S., Univ. of Havana, 1951; Int., Freyre De Andrade Hosp., Havana, 6 mos.

General Surgery. In the sixth quarter the students, during their course in physical diagnosis, attend clinics and demonstrations arranged to familiarize them with the techniques of examinations and diagnostic procedures used in general surgery and the surgical specialties. They also have the opportunity in this quarter to become familiar with certain basic principles in aseptic and atraumatic surgery and in isolation technique. The *junior* students, during their surgical quarter, attend ward rounds in surgery and the surgical specialties, act as clinical clerks on the wards and assist in the operative treatment of

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patients assigned to them. The surgical students in the *senior* year attend ward rounds in general surgery and the surgical specialties in the mornings and assist in the surgical out-patient clinics in the afternoon. Also in groups of two for the proportionate time available they are assigned to the emergency division of the out-patient clinic where they assist in the diagnosis and care of urgent conditions.

A six days' concentrated course of training in the administration of anesthetic agents is open to twenty-four medical students each school quarter. Properly qualified students observe and administer anesthesia under direct supervision of staff anesthetists.

Otolaryngological Division. An introductory course of instruction in the use of otolaryngological instruments, with a review of normal anatomy, is given to second-year students in the sixth quarter. Clinics during all quarters of the year are given to junior students; students during their surgical quarter work in the otolaryngological out-patient clinic as assigned. Ward rounds are held separately each week for third- and fourth-year students. Patients are assigned to junior students during the surgical quarter.

Ophthalmological Division. During the sixth quarter second-year students receive instruction in elementary ophthalmology. During the senior pediatric quarter the students work in the ophthalmological out-patient clinic as assigned, and assist in the study and treatment of eye diseases. Especial emphasis is placed on the underlying medical and surgical conditions. Each student follows throughout his time in the out-patient clinic all patients assigned to him. For those who manifest an unusual interest in this specialty, provision will be made for more advanced work. Throughout the senior surgical quarter the students attend ophthalmological ward rounds for one hour each week. During either their third or fourth academic year clinics covering the more general neuro-ophthalmological and medical problems are given.

Orthopaedic Division. In the sixth quarter an introductory course is given. During the surgical quarters the junior and senior students attend weekly ward rounds of one hour each in orthopaedics and fractures. Students in their senior surgical quarter are assigned in rotation to the orthopaedic out-patient clinic. These students also attend orthopaedic staff rounds at 5:30 P.M. Mondays through Fridays. An elective course in the treatment of fractures, limited to three students, is offered during the junior and senior surgical quarters. An elective course in physical therapy is also offered during these quarters. Arrangements may be made for students who so desire to do research or experimental work. They may also attend the state orthopaedic clinics as held.

Urologic Division. In the sixth quarter, second-year students are given a course of lectures and practical demonstrations in urologic physical diagnosis in the normal individual. Ward rounds on urologic

patients are given every Saturday at 8:30 A.M. for third- and fourth-year students in their surgical quarter. Small groups are selected from the senior surgical group of students and assigned in rotation to the urologic out-patient clinic. During one quarter of the year, urologic clinics are given weekly for the junior and senior classes. These clinics deal with the affections of the male and female urinary tract and of the male genital tract. Clinics for urethroscopic and cystoscopic investigation and for the more technical methods of urologic diagnosis and treatment are held Monday, Wednesday, and Thursday from 1:30 to 5:00 P.M. and Tuesdays and Thursdays from 9:30 A.M. to 12:30 P.M. throughout the year. X-ray conferences on all urologic cases are held Tuesday, Thursday, and Saturday mornings from 8:30 to 10:00 and are followed by staff rounds. Three senior students may select one of these cystoscopic clinics, x-ray conferences, and staff rounds as an elective. *The Urologic Journal Club* meets each week, and members of the staff review their respectively assigned journals. Interested students are welcome. Urologic pathology conferences are held twice a month throughout the year with the cooperation of the Pathology Department.

Division of Plastic, Maxillo-facial, and Oral Surgery: Didactic lectures are given to both the third- and fourth-year students to familiarize them with the basic principles of plastic, reconstructive, and destructive procedures. Bedside ward rounds and demonstrations are held twice weekly to illustrate these basic of trauma, disease, and reconstruction. Both private and public patients are assigned to students during the surgical quarter. Fourth-year students work in the Plastic Surgical Clinic which meets daily, with special reference on Wednesday which is the Plastic Surgical and Oncology return or follow-up day. Opportunity is afforded interested students to observe moulage and cast work, cosmetic restoration of color, the making of prosthetic appliances, etc. The Oral Surgical Clinic has three dentists and oral surgeons in attendance and is in operation five and one-half days each week. Associated closely and allied with the plastic surgical service, is the Medical Speech Pathologist and Audiologist, who has charge of the Speech Correction Program.

The Division of Medical Speech Pathology will work in close cooperation with the Division of Plastic and Oral Surgery, the Division of Otolaryngology, and the Departments of Pediatrics and Psychiatry. Weekly lectures are given to familiarize students with the various types of speech defects and abnormalities which are encountered in both children and adults. The pre and postoperative followup cleft palate patients are seen and evaluated each Wednesday afternoon in conjunction with the Plastic Surgical Clinic. Clinics will be arranged as desired with other departments. Speech instruction and therapy are given daily by appointment.

Neurosurgical Division. During all four quarters, separate weekly ward rounds are held for the junior and senior surgical groups. Emphasis in these rounds is placed upon the recognition of neurosurgical problems, followed by observation of the operative and post-operative procedures. Weekly x-ray and pathological conferences are held, and these may be attended by interested individuals. Tumor clinic conferences are held bi-monthly, on each second and third Thursday of the month.

Division of Thoracic Surgery. During the academic year ward rounds, lectures and demonstrations are held to acquaint the third- and fourth-year students with the principles and practice of surgery of the chest. The anatomy and physiology of the respiration and circulation are reviewed and their application to thoracic surgery is stressed. X-ray diagnosis is emphasized and frequent pathology conferences are held to give the students a well-rounded knowledge of the surgical diseases of the chest.

Dentistry. Second-year students, in the sixth quarter, are instructed in the principles of dentistry.

Division of Anesthesiology. Junior students, during their surgical quarter, are given a series of eleven lectures by the medical anesthesiologists. Following a brief history of anesthetic drugs, the response of the body to such drugs is discussed. The physiological basis of the reactions encountered in the operating room is stressed and the rational for choice of agents for various patients is presented. A six day's concentrated course of training in the administration of anesthetic agents is open to twenty-four senior medical students each school quarter. These students observe and administer anesthetics under the supervision of staff anesthesiologists.

A two- to three-year residency training program in Anesthesiology is available for physicians who are graduates of a Class A medical school and who have completed an internship in an accredited hospital. This is an approved residency which after two years qualifies the resident to take the American Board examinations. Applicants are accepted January 1st and July 1st. Opportunities are provided to employ all the varied techniques and agents utilized in anesthesia. Emphasis is placed on knowledge of the various diagnostic and therapeutic nerve blocks, and opportunity is provided to learn the standard regional nerve block procedures. Facilities are available for clinical and experimental research. Seminars are held twice a week for theoretical instruction and review of interesting cases and journals.

Courses available to graduate nurses include an eighteen months' course for nurses who have had no experience in anesthesia, and a nine to twelve months' course for nurses who have had five years of practical experience but no formal training in the specialty. Instruction embraces the theoretical aspects and clinical application of all

drugs and techniques in accepted usage. The program is divided into quarters. The major part of the basic theoretical instruction is given during the first three quarters. After a pre-clinical period of eight weeks, clinical practice runs parallel with the theoretical program. One class is accepted annually and enrolled on January 15. All appointments for the current year are made by September 1 of the preceding year. Graduates of these courses are eligible to take the examination given by the American Association of Nurse Anesthetists. Tuition is \$150.00 and \$100.00 respectively. Additional information concerning these programs for nurses may be obtained from Mary B. Campbell, R.N., Box 3094, Duke Hospital, Durham, North Carolina.

A. FRANCIS ROWLAND PERRY, R.N., M.A.A.N.A., *Assistant in Anesthesiology.*

MARTHA BROWN, R.N., M.A.A.N.A., *Assistant in Anesthesiology.*

LOLA A. GLENN, R.N., M.A.A.N.A., *Assistant in Anesthesiology.*

EMILY S. KIRKLAND, R.N., M.A.A.N.A., *Assistant in Anesthesiology.*

ELIZABETH PARTRIDGE, R.N., *Assistant in Anesthesiology.*

BEVERLEY ANN WHITE, R.N., *Assistant in Anesthesiology.*

Radiology

ROBERT JAMES REEVES, A.B., M.D., *Professor of Radiology and Chairman of the Department.*

A.B. and M.D., Baylor, 1920 and 1924; Int., Baylor Hosp., 1924-1925; Res. in Roentgenol., Mass. Gen. Hosp., 1925-1926; Asst. Attending Phys. in Roent. Ray Dept., Presbyterian Hosp., and Med. Center, N. Y., 1926-1930; Instr. in Med., Columbia Med. Sch., 1925-1930; *Radiologist, Duke Hospital, 1930—*

GEORGE JAY BAYLIN, A.B., M.D., *Professor of Radiology and Associate in Anatomy.*
A.B., Johns Hopkins, 1932; M.D., Duke, 1937; Asst. in Anat., Duke Med. Sch., 1934-1937; Int. in Surg., Sinai Hosp., Balto., 1937-1938; Voluntary Asst. in Path., Guy's Hosp., London, Sept., 1938-Feb., 1939; Instr. in Anat., Duke Med. Sch., Asst. Res., and Res. in Rad., and *Associate Radiologist, Duke Hospital, 1939—*

JOSEPH A. BOYD, A.B., M.D., *Assistant Professor of Radiology.*

A.B., King Coll., 1941; Postgrad., Davidson, 1942; M.D., Med. Coll. of Va., 1945; Rot. Int., Med. Coll. of Va. Hosp., 1946; U.S.A.A.F., Capt., M.C., 1946-1947; Fell., Radio., Johns Hopkins, 1948-1949; Asst. Res and Res., Radio., Johns Hopkins, 1949-1951; *Radiologist, Duke Hospital, 1951—*

AUBREY T. HORNSBY, B.S., M.D., *Assistant Professor of Radiology.*

B.S., Univ. Ala.; M.D., Coll. P. and S. Columbia Univ., 1946; Int., Univ. of Ala., 1946; Radiologist, U. S. Army, 1947-49; Path., Univ. of Ala., 1949-50; H-staff, Duke, 1950-51; Res., Radio., Duke, 1951-52; *Chief, Department of Radio., V.A. Hosp., Durham, N. C., 1953—*

JOSEPH H. McALISTER, M.D., *Associate in Radiology.*

M.D., Duke, 1947; Int., Baptist Mem. Hosp., Tenn., 1947-48; Res., Physio. and Med., Univ. of Tenn., 1948-49; Res., Radio., Kennedy Gen. Hosp., 1950-51; *Res., Radio., Duke, 1951—*

ALLEN TAYLOR, B.S., M.D., *Associate in Radiology.*

B.S., Duke, 1943; M.D., Duke, 1947; Int., Path., Emory, 1947-48; Int., Med., Baltimore City Hosp., 1948-49; Int., Radio., Baltimore City Hosp., 1949-50; Fellow Cancer Tng. Prog., Duke, 1950-51; *Res. and Asst. Res., Duke, 1951—*

S. PAUL PERRY, A.B., M.D., *Assistant Professor of Radiology.*

A.B., Davis and Elkins Coll., 1921; M.D., Rush (Univ. of Chicago), 1925; Rot. Int., St. Joseph's Hosp., 1925-26; Gen. Prac. Med., Wilmette, Ill., 1926-32; Res., Radio., Univ. of Chic. Cl., 1932-35; Instr., Radio., Univ. of Chicago Cl., 1935-37; Radiologist, Guthrie Clinic and Robt. Packer Hosp., 1937-53; Radiologist, Blossburg State Hosp. (Pa.), 1949-53; Clinical Prof. of Med., Hahnemann Med. Coll., 1952-53; *Radiologist, Watts Hosp., Durham, N. C., 1953—*

JOHN F. SHERRILL, JR., A.B., B.S., M.D., *Instructor in Radiology.*

Coll. Univ. of Ala., 1940-41; A.B. and B.S., Wake Forest Coll., 1943 and 1945; M.D., Bowman Gray Sch. of Med., 1946; Int., Hosp. Med. Coll. Va., 1947; Res., Radio., N. C. Baptist Hosp., 1948-50; U.S.N., M.C. (Assoc. Radio. and Chief Dept. Radio.), 1951-53; Priv. Prac., Radio., Charlotte, N. C., Feb-May, 1953; *Assoc. Radiologist, Watts Hosp., Durham, N. C., 1953—*

JOHN B. CAHOON, JR., R.T., A.S.X.T., *Technical Associate in Radiology.*

GRADUATE STUDENTS (HOUSE STAFF)

RESIDENTS AND ASSISTANT RESIDENTS

SIMMONS I. PATRICK, B.S., M.D., Duke, 1950.

LUCIUS G. SMITH, A.B., Washington and Lee; M.D., Duke, 1948.

MURRAY T. JACKSON, JR., M.D., Duke, 1950.

ANIS ABDUL KERIM, M.D., Royal Coll. of Med., Baghdad, Iraq, 1947.

JOSEPH K. ISLEY, B.S., Univ. of N.C., 1946; M.D., Bowman Gray, 1948.

F. ROBERT WALCH, M.D., Univ. of Pittsburgh Med. Sch., 1947.

BENJAMIN F. HUNTLEY, III, A.B., Duke, 1944; M.D., Harvard, 1948.

The student teaching schedule in roentgenology consists of a course in roentgen diagnosis and a course in therapeutic radiology. The first is offered during each scholastic quarter on Tuesday and Thursday of each week. The fundamental physics of x-ray is discussed, with the chief emphasis being placed upon the anatomical, pathological and physiological bases for the interpretation of x-ray films. The course is conducted in seminar fashion and no formal lectures are given. The students participate in and lead discussions with the instructor serving as the moderator. An attempt is made to acquaint the student with the aids of roentgenology in diagnostic problems. The correct use of x-rays in diagnosis is stressed.

Therapeutic radiology is given one hour weekly during each quarter. At these sessions the general problem of the treatment of benign, inflammatory and malignant lesions by x-ray and radium is discussed and the accepted views of the combination of these therapeutic agents with surgery is stressed. Representative cases are demonstrated, and the follow-up results are particularly stressed.

A limited number of senior students are permitted to attend routine film reading sessions in the Department of Radiology. They are also instructed in the fundamentals of fluoroscopic examinations and shown the many pitfalls of the inexperienced fluoroscopist.

X-ray conferences are scheduled with each specialty in the X-ray Conference room with weekly schedules. All x-ray cases on that service the preceding week are shown and briefly discussed for benefit of the house staff and attending students. At the present weekly conferences including the Ear, Nose and Throat, Orthopaedics, Neurosurgery, Thoracic surgery, Pediatrics, Cardiac, Gastro-intestinal, Urology are held and used as part of the teaching program. Tuesday and Friday afternoons special x-ray conferences of x-ray pathology are held.

X-ray Pathology conference 5 to 6 P.M. each Wednesday afternoon is given in the autopsy room."

Each Thursday afternoon and Wednesday evening a conference is held by the members of the x-ray staff and visiting radiologists. Difficult cases are brought up for discussion and diagnosis.

Obstetrics and Gynecology

BAYARD CARTER, A.B., B.A., M.A., M.D., *Professor of Obstetrics and Gynecology and Chairman of the Department.*

A.B., Delaware, 1920; B.A. and M.A., Oxford, 1923 and 1924; M.D., Johns Hopkins, 1925; Member Obs. and Gyn. Staff of New Haven Hosp. and Yale Med. Sch., 1925-1929; Assoc. Prof. Obs. and Gyn., and Head of Dept., Univ. of Va. Med. Sch., 1929-1931; *Obstetrician and Gynecologist, Duke Hospital, 1931—*

EDWIN CROWELL HAMBLIN, B.S., M.D., *Associate Professor of Obstetrics and Gynecology and Professor of Endocrinology.*

B.S. and M.D., Virginia, 1921 and 1928; Asst. and Instr. in Pharmacol. and Materia Medica, Baylor Med. Coll., 1922-1926; Int. and Res., Obs. and Gyn., Univ. of Va. Hosp., 1928-1930; Clin. Instr. in Obs. and Gyn., Univ. of Va. Med. Dept., 1930-1931; *Associate Obstetrician and Gynecologist; and Endocrinologist, Duke Hospital, 1931—*

WALTER LEE THOMAS, JR., A.B., A.M., M.D., *Associate Professor of Obstetrics and Gynecology.*

A.B., Lynchburg, 1926; A.M. and M.D., Virginia, 1927 and 1931; Int., Virginia-Mason Hosp., 1931-1932; Asst. Res. and Res. in Obs. and Gyn., Duke Hosp., 1932-1935; Assistant Obstetrician and Gynecologist, Henry Ford Hosp., Detroit, 1936-1937; Asst. Obstetrician and Gynecologist, Duke Hosp., 1937-1942; Major, Med. Corps, 65th (U. S.) Gen. Hosp., 1942-1945; *Assistant Obstetrician and Gynecologist, Duke Hospital, 1945—*

ROBERT NOWELL CREADICK, A.B., M.D., *Associate Professor of Obstetrics and Gynecology*

A.B., Wesleyan Univ., 1933; M.D. Yale, 1937; Int., Hartford Hosp., 1937-1939; Asst. Res. and Res., Duke Hosp., 1939-1943; Major, Med. Corps, U. S. Army, 1943-1946; Chief, Obs. Section, Walter Reed Gen. Hosp., 1945-1946; *1946—*

VIOLET HORNER TURNER, B.A., M.D., *Assistant Professor of Obstetrics and Gynecology.*

B.A., Univ. Hawaii, 1936; M.D., Univ. Chicago, 1940; Int., Rotat., Cincinnati General 1940-1941; Asst. Res., Endocrine, Duke Hospital, 1941; Int., Obstetrics, 1942, Lying-In Hosp., Chicago; Asst. Res., Endocrine, Duke, 1943; Asst. Res., Ob.-Gyn., 1943-1944; Res., 1944-1945; *1945—*

ELEANOR BEAMER EASLEY, B.A., M.A., M.D., *Associate in Obstetrics and Gynecology.*

B.A., Idaho, 1928; M.A., Iowa, 1929; M.D., Duke, 1934; Int. and Asst. Res. in Med. and Int., Asst. Res., and Res. in Obstetrics and Gynecology, and *Assistant Obstetrician and Gynecologist, Duke Hospital, 1934—*

CLARENCE DANIEL DAVIS, S.B., M.D., *Assistant Professor of Endocrinology, Obstetrics and Gynecology.*

S.B., Mass. Inst. of Tech., 1935; M.D., Johns Hopkins, 1939; Int. Robert Packer Hosp., 1939-40; Int., Genesee Hosp., 1940-41; Int., Univ. Hosp., Minn., 1941-42; Asst. Res., Res., Instr., Endocr., Obs.-Gen., Duke, 1942-46; Assoc., Endocr., Mason Clinic, Seattle, Wash., 1946-50; *Associate Obstetrician and Gynecologist, Duke, 1950—*

MARVIN PIERCE RUCKER, A.M., M.D., LL.D., *Lecturer in Obstetrics and Gynecology.*

A.B., A.M., and LL.D., Randolph-Macon, 1899 and 1938; M.D., Johns Hopkins, 1903; N. Y. Lying-In Hosp.; Demonstrator in Physiol., Pharmacol., Histol., Path., Embryol. and Obs., and Assoc. in Obs., and Assoc. Prof. of Obs., Med. Coll. of Va., 1903-1930; Obstetrician, Johnson-Willis Hosp., Richmond, Va., 1930; *1941—*

ROBERT ALEXANDER ROSS, B.S., M.D., *Visiting Lecturer in Obstetrics and Gynecology.*

B.S., North Carolina, 1920; M.D., Pennsylvania, 1922; Res. Physician, Univ. of Pa. Settlement House, 1921-22; Int., Episcopal Hosp., Phila., 1922-1924; Int. and Res., Kensington Hosp. for Women, 1923-1925; Comdr., Med. Corps, U. S. Navy, 1942-1945; Asst., Assoc. and Prof. of Obs.-Gyn., Duke Hosp., 1930-1952; Prof., Obs.-Gyn., Univ. of N. C. Mem. Hosp., 1952—; *1952—*

LEONARD PALUMBO, JR., A.B., M.D., *Visiting Lecturer in Obstetrics and Gynecology.*

A.B., M.D., Duke, 1940 and 1944; Int., Obs.-Gyn., Duke, 1944-45; Asst. Res., Obs.-Gyn., Endocr., Duke, 1945-47; Int., Path., Duke, 1948; Res., Obs.-Gyn., Duke, 1949-50; Assoc., Obs.-Gyn., Duke, 1950-52; Assoc., Obs.-Gyn., Univ. of N. C. Mem. Hosp., 1952—; *1952—*

- CHRISTA VON ROEBEL, M.D., *Associate in Obstetrics and Gynecology*.
M.D., Univ. of Leipzig, 1937; Obs.-Gyn., Univ. of Leipzig, 1937-1945; Acting Chmn., Dept. Obs.-Gyn., Univ. of Leipzig, 1945-1948; *Assoc., Obs.-Gyn., Duke, 1950—*
- WILLIAM A. GRAHAM, *Instructor in Obstetrics and Gynecology*.
M.D., Univ. of Pa., 1932; Int., Union Mem. Hosp., 1932-1933; Int., Royal Victoria Hospital, 1933-1934; Res., Woman's Hosp., 1934-1937; 1938—
- TROGLER F. ADKINS, *Instructor in Obstetrics and Gynecology*.
M.D., Duke, 1936; Int. in Surg., Duke, 1936-1937; Int., Asst. Res., and Res. in Obs. and Gyn., and *Assistant Obstetrician and Gynecologist, Duke Hospital, 1938—*
- RICHARD L. PEARSE, M.D., *Instructor in Obstetrics and Gynecology*.
M.D., Harvard, 1931; House Officer, Free Hosp. for Women, 1931; Int., Mass. Gen. Hosp., 1932-1934; Asst. Res., Providence Lying-In Hosp., 1935; Asst. Res. and Res. in Obs. and Gyn., Duke Hospital, 1935-1938; 1938—
- KENNETH A. PODGER, A.B., M.D., *Instructor in Obstetrics and Gynecology*.
A.B., M.D., Duke, 1937 and 1941; Int. and Asst. Res. in Med., Duke, 1941-1942; Lt., Med. Corps., U. S. Navy, 1942-1945; Asst. Res. and Res., Duke, 1946-1948; 1946—
- W. KENNETH CUYLER, B.A., M.A., Ph.D., *Research Instructor in Obstetrics and Gynecologic Laboratory Technics*.
B.A., Texas, 1923; M.A., Western Reserve, 1929; Ph.D., Duke, 1941; Dir. of Clin. Lab. Dept. of Endocrinol. and Metabolism, Cleveland Clinics, 1929-1938; 1938—
- C. P. JONES, *Technical Research Instructor in Obstetrics and Gynecology*.

GRADUATE STUDENTS (HOUSE STAFF)

RESIDENTS

- HOWARD CASEY DUCKETT, M.D., Duke, 1944.
CHARLES HENRY PEETE, JR., M.D., Harvard, 1947.

ASSISTANT RESIDENTS

- JOHN RAINEY ASHE, JR., M.D., Duke, 1948.
WALTER B. CHERNY, M.D., McGill, 1950.
KENNETH D. POWERS, M.D., Univ. of Kansas, 1947.
ALBERT W. THOMPSON, M.D., Northwestern Univ., 1947.
GEORGE SPANGLER WOODWARD, M.D., Cincinnati, 1949.
RUPERT KERR, M.D., Tulane, 1947.

INTERNS

- WILLIAM GILBERT BUTLER, M.D., Duke, 1953.
PAUL GREEN, JR., M.D., Duke, 1951.
CHARLES HARLAN HILLMAN, M.D., Duke, 1953.
JOHN B. MCCALL, JR., M.D., Duke, 1953.
TOM ALFORD VESTAL, M.D., Duke, 1953.

Second-year students receive seventeen hours of instruction in the fundamentals of obstetrics and gynecology during their course in physical diagnosis in the sixth quarter. Clinics and demonstrations for junior and senior students are held on Saturdays at 10:30 A.M. during the Autumn, Winter, and Spring Quarters and on Mondays at 11:30 A.M. in the Summer Quarter. During one quarter of the *junior* year each group of students attends ward rounds at 8:30 A.M. on Mondays, Wednesdays, and Saturdays; preoperative conferences at 8:30 A.M. on Tuesdays and Fridays; and the out-patient clinic at 1:30 P.M. five times weekly, for nine weeks. They also attend an endocrine clinic once a week for nine weeks during the junior year. The students also spend part of each day on the wards. *Senior* stu-

dents, during their surgical quarter, have ward rounds on obstetrics and gynecology on Saturdays at 8:30 A.M.

Elective courses in the diagnosis and treatment of obstetric and gynecological conditions are offered for junior and senior students.

Pediatrics

JEROME SYLVAN HARRIS, A.B., M.D., *Professor of Pediatrics and Associate Professor of Biochemistry.*

A.B., Dartmouth, 1929; M.D., Harvard, 1933; Med. House Officer, House of Good Samaritan, Boston, Oct., 1933-Jan., 1934; Int. in Med., Univ. of Chicago Clinics, 1934-1935; Int., Infants and Children's Hosp., Boston, 1935-1936; Asst. Res. and Assistant Pediatrician, Duke Hosp., 1936-1942; Lt. Col., Med. Corps, U. S. Army, 1942-1945; *Pediatrician, Duke Hospital, 1936—*

WILBURT CORNELL DAVISON, A.B., B.A., B.Sc., M.A., M.D., D.Sc., LL.D., *James B. Duke Professor of Pediatrics and Dean of the School of Medicine.*

A.B., Princeton, 1913; B.A., B.Sc., and M.A., Oxford, 1915, 1916, and 1919; M.D., Johns Hopkins, 1917; D.Sc., Wake Forest, 1932; LL.D., North Carolina, 1944; Int., Radcliffe Infirmary, 1915-1916; Capt., Med. Corps, A.E.F., 1917-1919; Asst. Res., Assoc. Ped., Acting Pediatrician in Charge, Johns Hopkins Hosp., 1919-1927; Instr., Assoc., Assoc. Prof., Acting Head of Dept. of Ped., and Asst. Dean, Johns Hopkins Med. Sch., 1919-1927; *Pediatrician, Duke Hospital, 1927—*

***ARTHUR FREDERICK ABT, B.S., M.D.,** *Professor of Pediatrics.*

B.S., M.D., Johns Hopkins, 1923; Associate Prof., Ped., Northwestern, 1952; 1952—

ANGUS MCBRYDE, B.S., M.D., *Associate Professor of Pediatrics.*

B.S., Davidson, 1924; M.D., Pennsylvania, 1928; Int. and Res. in Ped., Univ. of Pa. Hosp., 1928-1930; Asst. Res. in Ped., Johns Hopkins Hosp., and Asst. in Ped., Johns Hopkins Med. Sch., 1930-1931; *Associate Pediatrician, Duke Hospital, 1931—*

***HARVEY GRANT TAYLOR, A.B., A.M., M.D.,** *Associate Professor of Pediatrics and Bacteriology, and Associate Dean.*

A.B., San Jose State, 1928; A.M., Stanford, 1929; M.D., Duke, 1940; Int. in Ped., Duke Hosp., 1940-1941; Asst. Res. and Res. in Ped., Alfred I. duPont Instit., Nemours Found., Wilmington, Del., 1941-1943; Lt. Col., Med. Corps, U. S. Army, 1943-1946; *Associate Pediatrician, Duke Hospital, 1940—*

JAY MORRIS ARENA, B.S., M.D., *Associate Professor of Pediatrics.*

B.S., West Virginia, 1930; M.D., Duke, 1932; Int. in Ped., Johns Hopkins Hosp., 1932-1933; Asst. Res., Res., and *Associate Pediatrician, Duke Hospital, 1933—*

SUSAN COONS DEES, A.B., M.S., M.D., *Associate Professor of Pediatrics.*

A.B., Goucher, 1930; M.D., Johns Hopkins, 1934; M.S., Minnesota, 1938; Int., Johns Hopkins Hosp., 1934-1935, and Asst. Res. in Med., Strong Mem. Hosp., 1935-1936; Int. in Path., Balto. City Hosps., and Asst. Johns Hopkins Protein Clinic, 1936-1937; Research Fellow in Ped., Univ. of Minnesota, 1937-1938; Asst. Disp. Physician, Johns Hopkins Hosp., 1938-1939; *Associate Pediatrician, Duke Hospital, 1939—*

ARTHUR HILL LONDON, JR., B.S., M.D., *Associate in Pediatrics.*

B.S., North Carolina, 1925; M.D., Pennsylvania, 1927; Int., Rotat., Methodist Episcopal Hosp., Phila., 1927-1928; Asst. Res. in Ped., Children's Hosp., Cincinnati, 1928-1929; Chief Res., Children's Hosp., Phila., and Instr. in Ped., Pennsylvania Med. Sch., 1929-1930; *Assistant Pediatrician, Duke Hospital, 1932—*

ROBERT J. MURPHY, JR., B.S., M.D., *Associate in Pediatrics.*

B.S., State Teachers, Tenn., 1936; M.D., Vanderbilt, 1940; Int., Ob. and Ped., Duke, 1940-41; Asst. Phys., Med., State Hosp., Goldsboro, N. C., 1941-43; Asst. Phys., Med., State Hosp., Morganton, N. C., 1943-45; Int., Asst. Res., and Res., Ped., Duke, 1945-47; Priv. Pract., 1947-48; N. C. State Bd. of Health, 1950; *Assistant Pediatrician, Duke Hospital, 1950—*

WILLIAM J. A. DEMARIA, B.S., M.D., *Associate in Pediatrics.*

B.S., Univ. of Conn., 1944; M.D., Duke, 1948; Int., Asst. Res., and Res., Ped., Duke, 1948-1951; Markle Scholar in Med. Science, 1952—; *Assistant Physician, Duke Hospital, 1951—*

ATALA THAYER SCUDDER DAVISON, A.B., M.D., *Associate in Pediatrics.*

A.B., Bryn Mawr, 1915; M.D., Johns Hopkins, 1920; Asst. in Bact., Am. Red Cross, A.E.F., 1917-1918; 1942—

* On leave.

*MILDRED M. SHERWOOD, R.N., *Associate in Pediatrics.*

Diploma, Mount Sinai Hospital, New York City, 1923; Head Nurse, Mount Sinai Hospital, 1923-26; Head Nurse, Johns Hopkins Hospital, 1926-30; *Supervisor of Pediatric Nursing Service*, 1930—

J. STREET BREWER, M.D., *Instructor in General Practice of Medicine.*

M.D., Jefferson Med. Coll., 1919.

GEORGE F. BOND, M.D., *Instructor in General Practice of Medicine.*

M.D., McGill Univ., 1945.

AMOS N. JOHNSON, M.D., *Instructor in General Practice of Medicine.*

M.D., Univ. of Pa., 1933.

GEORGE A. WATSON, JR., A.B., M.D., *Instructor in Pediatrics.*

A.B., M.D., Duke, 1934 and 1939; Rot. Int., Watts Hosp., 1939-40; Asst. Res., Ped., Watts Hosp., 1940-41; Asst. Res., Ped., Children's Hosp., Phila., 1941-42; U. S. Army, M.C., Capt., 1942-46; Res., Ped., Duke, 1946-47; 1947—

WILLIAM W. FARLEY, B.A., M.D., *Instructor in Pediatrics.*

B.A., Univ. of Richmond, 1940; M.D., Med. Coll. of Va., 1943; Rot. Int., Charlotte Mem. Hosp., 1943-44; Capt., U. S. Army, M.C., 1944-46; Priv. Prac., 1946-48; Asst. Res. and Res., Ped., Duke, 1948-49; 1949—

*GEORGE WALLACE KERNODLE, A.B., M.D., *Instructor in Pediatrics.*

A.B., Elon Coll., 1941; M.D., Duke, 1944; Int., Ped., 1945; Asst. Res., Ped., Children's Hosp., Cincinnati, O., 1945-1946; Asst. Res., Ped., Duke, 1946-1947; 1946—

JOHN T. KING, A.B., M.A., M.D., *Instructor in Pediatrics.*

A.B., Elon Coll., 1938; M.A., Duke, 1941; M.D., Med. Coll. of Va., 1945; Rot. Int., Rex Hosp., 1945-46; Int. and Asst. Res., Ped., Duke, 1947-49; 1949—

*FREDERICK T. EASTWOOD, B.A., M.D., *Instructor in Pediatrics.*

B.A., Duke, 1941; M.D., Temple Univ., 1944; Lt. (jg), U. S. Navy, M.C., 1944-46; Preceptorship, Ped., San Diego, Calif., 1946-48; Asst. Res. and Res., Ped., Duke, 1948-1949; 1949—

PAUL FRANKLIN MANESS, A.B., M.D., *Instructor in Pediatrics.*

A.B., M.D., Duke, 1936, 1940; Rot. Int., Grady Hosp., 1940-1941; Asst. Res. Steiner Clinic, 1941-1942; Lt. Comdr., Med. Corps, U. S. Navy, 1942-1947; Asst. Res., Ped., Duke, 1947-1949; 1947—

GRADUATE STUDENTS (HOUSE STAFF)

RESIDENTS AND ASSISTANT RESIDENTS

FRANK P. ANDERSON, JR., B.S., Davidson Coll., 1949; M.D., Med. Coll. of South Carolina, 1952; 7/1/52—

KAY BACHMAN, M.D., Tulane, 1951; 10/1/53—

RICHARD M. BOWLES, M.D., Duke, 1952; 1/1/52—

CHARLES P. BUGG, A.B., Duke, 1947; M.D., Johns Hopkins, 1951; 7/1/52—

A. STUART FITZHUGH, JR., B.S., M.D., Univ. of Arkansas, 1944 and 1948; 10/1/52-9/30/53.

WILLIAM P. HADLEY, M.D., Duke, 1948; 7/1/53—

GUNYON M. HARRISON, B.S., Va. Mil. Inst., 1943; M.D., U. of Va. Med. Sch., 1946; 1/1/52—

WILLIAM T. MCLEAN, JR., B.S., Wake Forest Coll., 1948; M.D., Bowman Gray, 1951; 7/1/53—

JAMES L. MORGAN, M.D., Duke, 1949; 4/1/53—

A. DOUGLAS RICE, M.D., Duke, 1951; 3/20/51—

OLIN G. SHIVERS, JR., M.D., Cornell Med. Coll., 1948; 7/1/53-9/15/53.

GORDON D. STANLEY, B.S., Univ. of Fla., 1947; M.D., Duke, 1951; 1/15/52—

THADDEUS B. WESTER, A.B., M.D., Duke, 1946 and 1951; 7/1/53—

INTERNS

GEORGE W. BRICE, JR., A.B., M.D., Duke, 1949 and 1953; 7/1/53

DOROTHY A. HAHN, A.B., Woman's Coll., Univ. N. C., 1949; M.D., Bowman Gray, 1953; 7/1/53—

* On leave.

PARKER MOORE, M.D., Duke, 1952; 7/1/53-9/30/53.

FRANKLIN C. NIBLOCK, B.S., M.D., Duke, 1949 and 1942; 7/1/53—

M. VANN PARKER, M.D., Duke, 1953; 3/1/53—

ROBERT M. ROSEMOND, A.B., M.D., Duke, 1949 and 1952; 1/1/53—

INTERNS (OBSTETRICS-PEDIATRICS)

JOHN T. DEES, B.S., Univ. of North Carolina, 1948; M.D., Duke, 1952; 7/1/53—

JAMES A. KNIGHT, A.B., Wofford Coll., 1941; B.D., Duke, 1941; M.D., Vanderbilt, 1952; 7/1/53—

MICHAEL A. MCCALL, M.D., Duke, 1952; 7/1/53—

JOHN E. ZELIFF, M.D., Duke, 1947; 7/1/53—

FELLOWS

LAETITIA M. BRUCE, M.B., Ch.B., St. Andrews Univ., 1946; House Phys., Paed., House Surg., Obs.-Gyn., Royal Infirmary, Dundee, 1946-47; Res. Obs. Officer, Co. Maternity Hosp., Cambridge, England, 1947-48; House Surg., Addenbrookes Hosp., Cambridge, 1948-49; Res. Med. Officer, King George V Merchant Seamen's Hosp., Malta, 1949-50; House Phys., Paed., Newcastle Gen. Hosp., 1951; Registrar, Paed., Princess Mary Maternity Hosp., Newcastle, 1952-53; 10/1/53—

MENG CHUN-CHANG, M.B., Taiwan Univ., 1950; 1/1/53—

E. CROFT LONG, M.B., B.S., Univ. of London, St. Mary's Hosp., M.R.C.S., L.R.C.P., England, 1952; 1/15/53—

SHIZUO MORISHIGE, Grad., Tokyo Imperial Univ. Med. Dept., 1924; 1/1/53-9/15/53.

MASAYUKI SAITO, Grad., Nippon Univ., Japan, 1945; 7/1/52-9/1/53.

Junior and senior students, during their medical quarters, have pediatric ward rounds one hour each week. These junior students receive instruction in introductory pediatrics and the physical diagnosis of infants and children. The senior students are divided into three groups, each of which spends one quarter in pediatrics. During this quarter they are assigned in rotation as clinical clerks on the children's ward, in the nursery, pediatric out-patient department and the well-baby clinic. Students may attend on a voluntary basis the special pediatric clinics—nephritis, cardiac, allergy, convulsive disorders and chronic pulmonary disease. In addition to ward rounds, a weekly staff conference and daily out-patient teaching clinics, special conferences are devoted to normal growth and development, pediatric roentgenology, practical aspects of pediatric nursing procedures and the preparation of diets for infants and children. Under the supervision of the Social Service Department, students visit homes to investigate the social, environmental and family aspects of disease in certain of their patients. Elective courses: Senior students may spend two weeks in general practice with Instructors in General Practice. In addition to the six pediatric internships, there are four in which six months each are spent in obstetrics and pediatrics for graduates who plan to enter general practice. Seven assistant residencies and one residency are available.

Preventive Medicine and Public Health

NORMAN FRANCIS CONANT, B.S., A.M., Ph.D., *Professor of Mycology and Associate Professor of Bacteriology.*

DAVID TILLERSON SMITH, A.B., M.D., *Professor of Bacteriology, Chairman of the Department, and Associate Professor of Medicine.*

JEROME SYLVAN HARRIS, A.B., M.D., *Professor of Pediatrics and Associate Professor of Biochemistry.*

ELBERT LAPSLEY PERSONS, A.B., M.D., *Associate Professor of Medicine, Director of Student Health, and Associate Professor of Preventive Medicine and Public Health.*

JOHN E. LARSH, JR., A.B., M.S., Sc.D., *Associate in Parasitology.*

A.B. and M.S., Illinois, 1939 and 1940; Sc.D., Johns Hopkins, 1943; Professor of Parasitology, Univ of N. C., 1943.

CAROLINE HELMICK, A.B., M.D., *Associate in Preventive Medicine.*

A.B., Univ. of Minn., 1918; M.D., Univ. of Minn., 1933; Resident, Pokegama San., Pokegama, Minn., 1933-1934; Resident, Pediatrics, Janney Hosp., Minneapolis, 1934; Resident, Pediatrics, Childrens Hosp., St. Paul, 1934-1935; College physician, Student Health, Carleton Coll., Northfield, Minn., 1935-1942; Medical Director, Eastern area, American Red Cross, 1943-1949; *Associate in Preventive Medicine, Duke, 1949—*

EDWARD G. MCGAVRAN, A.B., M.D., M.P.H., *Visiting Lecturer in Preventive Medicine and Public Health.*

A.B., Butler Univ., 1924; M.D., M.P.H., Harvard, 1928, 1935; Dean and Professor of Epidemiology, Sch. of Publ. Hlth., Univ. of N. C.

JOHN J. WRIGHT, A.B., M.D., M.P.H., *Visiting Lecturer in Preventive Medicine and Public Health.*

A.B., M.D., Vanderbilt, 1931, 1935; M.P.H., Johns Hopkins, 1939; Prof. of Publ. Hlth. Admin., Sch. of Publ. Hlth., Univ. of N. C.

WILLIAM C. GIBSON, B.S.C.E., M.P.H., *Visiting Lecturer in Preventive Medicine and Public Health.*

B.S.C.E., N. Y. Univ., 1936; M.P.H., Univ. of N. C., 1950; Instr. in Field Training, Sch. of Publ. Hlth., Univ. N. C.

SIDNEY S. CHIPMAN, B.A., M.D., C.M., M.P.H., *Visiting Lecturer in Preventive Medicine and Public Health.*

B.A., Acadia Univ., 1924; M.D., C.M., McGill, 1928; M.P.H., Yale, 1947; Prof. of Maternal and Child Health, Sch. of Publ. Hlth., Univ. of N. C.

WILLIAM P. RICHARDSON, A.B., M.D., M.P.H., *Visiting Lecturer in Preventive Medicine and Public Health.*

A.B., Wake Forest Coll., 1926; M.D., Med. Coll. of Va., 1928; M.P.H., Johns Hopkins, 1933; Res. Prof. of Publ. Hlth. Admin., Sch. of Publ. Hlth., Univ. of N. C.

W. G. BROWN, A.B., *Instructor in Preventive Medicine and Public Health.*

A.B., North Carolina, 1932; Chemist, Water Dept., Durham, N. C.

ALBERT DERWIN COOPER, A.B., M.D., *Instructor in Medicine.*

JESSE HARRISON EPPERSON, B.S., *Lecturer in Preventive Medicine and Public Health.*

B.S., Okla., 1914; Health Officer, Durham City and County, 1922; 1930—

D. M. WILLIAMS, B.S., *Lecturer in Preventive Medicine and Public Health.*

B.S., North Carolina, 1910; Superintendent of Water and Sewer Dept., Durham, N. C.

H. POPE, A.B., A.M., Ph.D., *Assistant Professor of Bacteriology.*

Preventive Medicine and Public Health. In the freshman year there are four lectures given to provide some basic orientation predicated upon the fact that disease has a community as well as a personal aspect and that the social component of illness is an important force in the work of the doctor as well as in the life of the community. The student is introduced to disease as a mass or community problem and to medicine as a social institution.

In the sophomore year there is a series of lectures and discussions, totaling fifty-two hours, which outline in some detail the interrelationships between medicine and society. This course attempts to provide an understanding of the general principles governing the circumstances under which disease occurs and also the general principles used in the development of measures aimed at the control of disease, both communicable and non-communicable. The effect of the physical environment on human health is briefly discussed with special emphasis on the relationship of the practicing physician to environmental control programs and policies. An overview is given of the basic health problems at the various stages of life.

In alternate years, the senior and junior students meet together for eleven one-hour sessions. These sessions are devoted to discussions of the application of the principles of preventive medicine as they can be applied by the physician in private practice. Attention is also directed to the role of community health and welfare agencies as adjuncts to the physician in the management of his individual patient. The care method of presentation and study is used, with groups of students acting as the panel of experts.

Medical Parasitology. This is a lecture and laboratory course given one morning a week in the fourth quarter. Most of the emphasis is placed on the symptomatology, diagnosis and therapy of the various helminthic and protozoal diseases in man; several periods are devoted to medical entomology.

Legal Medicine Toxicology

HAYWOOD M. TAYLOR, *Professor of Toxicology and Associate Professor of Biochemistry.*

J. B. BRADWAY, *Professor of Law.*

E. C. BRYSON, *Associate Professor of Law.*

W. D. FORBUS, *Professor of Pathology.*

D. T. SMITH, *Professor of Bacteriology and Associate Professor of Medicine.*

This course embraces a discussion of the relation of physicians to legal criminal procedures, jurisdiction of the coroner and medical examiner, laws governing the dead human body, personal identity of the living, and the dead, the medicolegal autopsy, traumatic injuries and fractures, rape, abortion, asphyxial death, homicidal, suicidal, and industrial poisoning, alcoholism, the examination of blood, stains, fibers, and the detection of malingering. This course is open to junior and senior students and is given in alternate years. Discussions of medicolegal problems for the house staff and senior students, and joint conferences of the medical and law students also are held.

Undergraduate Cancer Training Program

(Supported by a grant in aid from the U. S. Public Health Service)

STAFF

Coordinator: WILEY D. FORBUS, M.D.

Basic Science Teaching Fellow: WALTER M. BENSON, M.D.

Clinical Teaching Fellow: BLAKE FAWCETT, M.D.

Social Service Worker: ISABEL PELTON

During the first quarter, a course in surgical pathology is available to interest senior students. Classes are held twice weekly; each class is two hours. The sessions are informal. Gross and microscopic materials with clinical abstracts are readily available. Clinico-pathological correlation is stressed throughout the course.

During the second and third quarters, weekly seminars are held on various phases of the tumor problem. Clinico-pathological correlation is stressed as the viewpoints of the clinician, radiologist, and pathologist are presented. General practitioners, members of the clergy, the social service division, and nursing staff are invited to discuss certain aspects in the care of patients with neoplasms.

In addition, the Undergraduate Cancer Training Program staff participates in the teaching of neoplasia to the sophomore students. This is done as a supplementary program to the students as they are being taught the principles of neoplastic disease by the Department of Pathology. New material is presented to them, and here the clinico-pathological approach to the problem of neoplasia has special emphasis. In this phase of the program those regions of the body in which the frequency of tumors is highest are selected for study.

The Program, through its secretarial and social service personnel and its follow-up studies, is a valuable adjunct in the clinical training of the students. Contact is maintained with discharged patients and regularly scheduled appointments are made for their return visits to the various outpatient departments for periodic evaluation and indicated therapy. The program maintains an active tumor registry and, through the secretarial staff, this information is made available for study of particular phases of the tumor program.

Committees of the School of Medicine



COMMITTEE ON HEALTH AFFAIRS

See page 2.

COMMITTEE ON ADMISSION

J. E. MARKEE (Chairman)	N. F. CONANT	K. E. PENROD
MRS. F. H. SWETT (Secretary)	J. P. HENDRIX	S. P. MARTIN
	G. L. ODOM	

COMMITTEE ON THE CURRICULUM

J. S. HARRIS (Chairman)	DERYL HART	J. E. MARKEE
N. F. CONANT	HANS LOWENBACH	E. A. STEAD, JR.

COMMITTEE OF THE DURHAM VETERANS HOSPITAL

J. D. MYERS (Chairman)	W. D. FORBUS	N. F. ROSS
G. J. BAYLIN	DERYL HART	W. W. SHINGLETON
W. C. DAVISON	G. MARGOLIS	G. A. SILVER
E. W. BUSSE	R. J. REEVES	E. A. STEAD, JR.

COMMITTEE ON THE LIBRARY

MRS. J. H. SEMANS (Chairman)	F. W. BERNHEIM	BAYARD CARTER
J. H. SEMANS	F. L. ENGEL	E. L. PERSONS
		WILL. C. SEALY

BEAUMONT COMMITTEE

J. W. BEARD (Chairman)	DERYL HART	D. T. SMITH
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COMMITTEE ON STUDENT TECHNICIANS

H. M. TAYLOR (Chairman and Director)	D. T. SMITH	GEORGE MARGOLIS (Associate Director)
	WAYNE RUNDLES	

COMMITTEE ON THE OUT-PATIENT CLINIC

J. M. RUFFIN (Chairman)	C. E. GARDNER, JR.	F. R. PORTER
	HANS LOWENBACH	

COMMITTEE ON HOSPITAL RECORDS

E. L. PERSONS (Chairman)	J. HARNED BUFKIN	W. L. THOMAS, JR.
L. D. BAKER	C. E. GARDNER, JR.	LESLIE B. HOHMAN
F. R. PORTER	LEILA CLARK	J. S. HARRIS

COMMITTEE ON MEDICAL ART AND ILLUSTRATION

J. W. BEARD (Chairman)	J. E. MARKEE
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COMMITTEE ON PHYSICAL THERAPY

L. D. BAKER
(*Chairman*)
F. G. HALL

HELEN L. KAISER
E. L. PERSONS
HANS LOWENBACH

F. R. PORTER
ELLEN HUCKABEE

COMMITTEE ON SOCIAL SERVICE

W. M. NICHOLSON
(*Chairman*)

E. L. PERSONS
F. R. PORTER
HANS LOWENBACH

K. S. GRIMSON
JANET WIEN

COMMITTEE ON THE BORDEN AWARD

J. E. MARKEE
(*Chairman*)

K. S. GRIMSON
J. P. HENDRIX

K. LER. PICKRELL

HOSPITAL ADMINISTRATIVE COMMITTEE

F. ROSS PORTER
(*Chairman*)
BAYARD CARTER
W. C. DAVISON
DERYL HART

W. D. FORBUS
ELSIE W. MARTIN
L. B. HOHMAN
J. M. PYNE

D. T. SMITH
E. A. STEAD, JR.
LOUIS E. SWANSON
FLORENCE K. WILSON
DEWITT WRIGHT

COMMITTEE ON THE TRENT PRIZE

J. E. MARKEE
(*Chairman*)

BAYARD CARTER

C. E. GARDNER, JR.

Staff of Duke Hospital



Administrative and Technical Staff

- *F. ROSS PORTER, A.B., *Superintendent and Professor of Hospital Administration.*
J. MINETREE PYNE, B.S., *Acting Co-Superintendent, Assistant Superintendent and Assistant Professor of Hospital Administration.*
LOUIS E. SWANSON, A.B., *Acting Co-Superintendent, Assistant Superintendent and Assistant Professor of Hospital Administration.*
DEWITT WRIGHT, B.S., J.D., *Assistant Superintendent and Associate in Hospital Administration.*
HORACE B. CUPP, *Assistant Professor of Administration.*
F. VERNON ALTVATER, *Consultant to the Dean.*
E. ALLISON HERRON, A.B., *Administrative Assistant.*
JOHN A. MCBRYDE, A.B., *Administrative Assistant in Charge of Out-patient Clinic.*
ANNE S. GARRETT, A.B., *Personnel Officer.*
C. H. COBB, Ph.G., *Business Manager, Medical Division.*
HENRY BERTRAND, B.B.A., B.S., *Assistant Business Manager, Medical Division.*
E. S. RAPER, A.B., *Business Manager, Surgical Division.*
R. N. CRENSHAW, *Assistant Business Manager, Surgical Division.*
WATSON S. RANKIN, M.D., D.Sc., *Visiting Lecturer in Hospital Administration*
MARSHALL I. PICKENS, A.B., M.A., *Associate in Hospital Administration.*
CHARLES E. PRALL, A.B., M.A., Ph.D., *Visiting Lecturer in Hospital Administration.*
GEORGE P. HARRIS, A.B., *Instructor in Hospital Administration.*
JAMES R. FELTS, JR., *Instructor in Hospital Administration.*
WILLIAM A. TAYLOR, A.B., *Assistant in Administration.*
ERIC L. FISCHER, A.B., *Assistant in Administration.*
KIRK OGLESBY, A.B., *Assistant in Administration.*
HENRY F. MABRY, *Assistant in Administration.*
HUMBERTO ECHEVERRI, *Assistant in Administration.*
ALBERT J. MALIK, *Assistant in Administration.*
WILLIS THRASH, A.B., *Assistant in Administration.*
J. A. SKARUPA, A.B., *Assistant in Administration.*
GUY N. CROMWELL, A.B., *Assistant in Administration.*
RUSSELL L. DICKS, A.B., B.D., D.D., *Chaplain.*
LELIA CLARK, R.N., B.S., M.A., *Director of Nursing Service.*
ELSIE WILSON MARTIN, A.B., M.S., *Director and Professor of Dietetics.*
ERMA L. ADAMS, A.B., C.P.A., *Accountant and Administrative Assistant Dietitian.*
I. THOMAS REAMER, Ph.G., *Pharmacist and Associate in Pharmacy.*
EDWARD SUPERSTINE, M.S., *Assistant Pharmacist.*
JESSIE LEE SMITH, B.S., *Assistant Pharmacist.*
REBA NEW HOBGOOD, *Public Dispensary.*
JUDITH FARRAR, A.B., B.S., *Librarian and Assistant Professor of Medical Literature.*
MILDRED P. FARRAR, A.B., *Assistant Librarian.*
CHARLES RONALD STEPHEN, B.Sc., M.D., C.M.D.A., *Chief Anesthetist and Professor of Anesthesiology.*

* On leave.

MARY B. CAMPBELL, R.N., M.A.A.N.A., *Chief Nurse Anesthetist.*

ROBERT JAMES REEVES, A.B., M.D., *Chief Radiologist and Professor of Radiology.*

JANET WIEN, A.B., M.S., *Director and Assistant Professor of Social Service.*

JESSIE HARNED BUFKIN, *Record Librarian and Assistant Professor of Medical Record Library Science.*

ELON HENRY CLARK, *Artist and Professor of Medical Art and Illustration.*

ROBERT BLAKE, *Assistant Artist and Instructor in Medical Art and Illustration.*

HENRY F. PICKETT, *Assistant Artist and Instructor in Medical Art and Illustration.*

BERT R. TITUS, *Braces and Instruments and Technical Instructor in Orthosis.*

HELEN LOUISE KAISER, R.P.T., *Director and Assistant Professor of Physical Therapy.*

ELIZABETH R. WAGGONER, B.S., *Occupational Therapist.*

Internships and Residencies

Straight internships of one year duration are available in Medicine, Surgery, Obstetrics-Gynecology, Pediatrics, Psychiatry and Pathology. Mixed internships are available in Obstetrics and Pediatrics. A stipend of \$25 per month is offered in Medicine, Surgery and Pediatrics plus room, board, laundry and uniforms. An allowance of \$12.50 is paid to married house officers in lieu of a room in the house staff quarters. Appointments are from July 1 through June 30, although special arrangements can be made with individual department heads.

Assistant Residencies and Residencies are available in the following services:

Service

Internal Medicine

Allergy

Cardiovascular Diseases

Dermatology-Syphilology

Gastroenterology

Neurology

Pulmonary Diseases

Surgery-General

Neurology-Surgery

Ophthalmology

Otolaryngology

Orthopedic Surgery

Plastic Surgery

Thoracic Surgery

Urology

Oral Surgery (Dentistry)

Pediatrics

Pediatrics and Obstetrics

Obstetrics and Gynecology

Endocrinology

Psychiatry

Anesthesia

Pathology

Radiology

Chief of Department

Eugene A. Stead, Jr., M.D.

Oscar C. E. Hansen-Prüss, M.D.

Edward S. Orgain, M.D.

J. Lamar Callaway, M.D.

Julian M. Ruffin, M.D.

E. Charles Kunkle, M.D.

Elijah E. Menefec, M.D.

Deryl Hart, M.D.

Barnes Woodhall, M.D.

W. Banks Anderson, M.D.

Watt W. Eagle, M.D.

Lenox D. Baker, M.D.

Kenneth L. Pickrell, M.D.

Will C. Sealy, M.D.

Edwin P. Alyea, M.D.

Nicholas Georgiade, M.D.

Jerome S. Harris, M.D.

Jerome S. Harris, M.D.

Bayard Carter, M.D.

E. C. Hamblen, M.D.

Ewald W. Busse, M. D.

C. Ronald Stephen, M.D.

Wiley D. Forbus, M.D.

Robert J. Reeves, M. D.

Application forms for all internships may be obtained by writing to the Superintendent, Duke Hospital, Durham, North Carolina. Graduates of any Class A medical school are eligible for internships.

Appointments are open to women and to graduates of foreign medical schools. Duke Hospital participates in the National Intern Matching Program, Inc.

After completion of an internship in Duke Hospital or in another acceptable hospital, a certain number may be appointed as assistant residents in the above listed specialties plus Biochemistry, the Student Health Service or as fellows of the Private Diagnostic Clinics at a salary of \$250 to \$800 per year plus maintenance. A smaller number may be eventually promoted to the residency in the above listed services at an annual salary of \$500 to \$1300 per year plus maintenance. Application should be made to the head of the department concerned.

The Hospital and School of Medicine are an integral part of the Duke University campus, and its educational, recreational and athletic facilities are available for the Resident Staff.

The Veteran's Hospital opened on April 6, 1953 and located within walking distance of Duke Hospital, is integrated with the Duke Hospital house staff training program. House officers on certain services may be assigned to either hospital for parts of a year. Administratively, the hospitals are separate but educationally they are closely integrated. The Medical Staff of the Veteran's Hospital is supervised by a Dean's Committee composed of faculty members of the Duke School of Medicine. Certification of training is provided by Duke Hospital.

Postgraduate Study

Graduates in medicine are welcomed at the various clinics and demonstrations in medicine, surgery, obstetrics, and other specialties, which are held from 9:30 A.M. to 12:30 P.M. each Saturday, as well as at the daily ward-rounds in the mornings, and the out-patient clinics in the afternoons. They can start at any time and remain as long as they wish. Additional special work in any department for a period of not less than three months may be arranged by consultation with the head of the department concerned. A certain number of residencies also are available at Duke Hospital in medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry, neurology, dermatology, orthopaedics, urology, otolaryngology, ophthalmology, roentgenology, pathology, and biochemistry. Further information can be obtained by writing to the Dean.

Returning veterans are requested to register on arrival at the Dean's office, and with Mr. Oscar Petty, Jr., 303 Administration, who will assist them in applying for Veteran's benefits.

Medical Service Courses at Duke Hospital



Hospital Administration

Eight internships in hospital administration leading to a certificate are available to university graduates whose character, tact, and ability for leadership are good, and whose academic standing is high. These internships are of two years' duration and pay a small salary in addition to room, board, and laundry. Vacations of two weeks are allowed during each year of internship.

The instruction is practical rather than theoretical in emphasis. The interns are rotated through seven different assistant administrative positions in the Hospital. There is also a weekly seminar lasting two hours and two classes lasting one hour each during the week.

The interns may register in the Graduate School of Duke University, and receive the A.M. degree after the successful completion of a thesis and twenty-four semester hours of university courses in various fields. This additional work will add one year to the program. Further information may be obtained by writing to the Superintendent, Duke Hospital, Durham, N. C.

Nursing

FLORENCE K. WILSON, R.N., B.A., M.A., *Dean of the School of Nursing and Professor of Nursing Education.*

B.A., Univ. of Mich., 1913; R.N., City Hospital Sch. Nursing, N. Y., 1920; M.A., West. Res. Univ., 1930.

LELIA R. CLARK, R.N., B.S., M.A., *Director of Nursing Service and Professor of Nursing.*

R.N., Phila. Mt. Sinai Hosp. Sch. Nursing, 1932; B.S., Columbia, 1948; M.A., Columbia 1949.

LOUISE EGAN, B.S., R.N., *Director of Practical Nursing Division.*

R.N., Elizabeth City General Hospital Sch. Nursing; B.S.N.Ed., Duke, 1952.

WINIFRED M. PARKER, R.N., B.S., N.Ed., *Assistant Director of Practical Nursing Division.*

R.N., Stuart Circle Hospital, 1949; B.S.N.Ed., Duke, 1951.

Practical Nursing Division of the Vocational Education Department of the Durham City Schools, Duke Unit: After three months of classroom instruction at the Hillside High School, nine months are spent in classes and practical training at Duke Hospital. At the completion of this course, the student receives a certificate in practical

nursing and is eligible for licensure as a practical nurse in North Carolina.

School of Nursing: Information may be obtained by writing to the Dean of the School of Nursing, Hanes House, Duke University, Durham, N. C.

Dietetics

ELSIE W. MARTIN, A.B., M.S., *Director and Professor of Dietetics.*

A.B., Whitman, 1913; M.S., Teachers Coll., Columbia, 1927; Prof. of Home Economics, Puget Sound, 1915-1917; Dietitian, Univ. of Iowa Hosp., 1919-1920, and Charles T. Miller Hosp., St. Paul, Minn., 1920-1926; Admin. Dietitian, Lakeside Hosp., Cleveland, 1927-1930; *Director of Dietetics, Duke Hospital, 1930—*

ERMA LEE ADAMS, A.B., C.P.A., *Accountant and Assistant Director.*

GLORIA KICKLIGHTER, B.S., *Therapeutic Dietitian.*

BETTY SHUMATE, B.S., *Therapeutic Dietitian.*

BARBARA C. CRANE, B.S., *Administrative Dietitian.*

RUBY E. DAVENPORT, B.S., *Administrative Ward Dietitian.*

VIRGINIA NESTOR, B.S., *Assistant Therapeutic Dietitian.*

ELIZARETH LOVE, *Assistant Administrative Dietitian.*

BETTY A. BARNARD, *Assistant Therapeutic and Teaching Dietitian.*

In addition to the dietetic training of the students of the Schools of Medicine and Nursing, fourteen dietetic interns may be admitted to the School of Dietetics and given the certificate of graduate dietitian after the successful completion of one year's internship. The entrance requirements are a Bachelor's degree from an approved university or college, with majors in nutrition and institutional management, and the courses in chemistry, biology, social science, and education recommended by the American Dietetic Association. The course for dietetic interns provides instruction in all phases of hospital and institutional dietetics, including experience from the buying and storage of food to its service to the patients according to the physician's orders. Interns may apply some of their time in securing graduate credit.

The course starts the first of September. All students pay a registration fee of \$10 at the time of appointments. Additional fees are charged if the intern takes additional work in the University for an advanced credit. Maintenance is provided. More detailed information and application blanks may be obtained from the Professor of Dietetics, Duke University School of Dietetics, Durham, N. C.

Social Service

JANET WIEN, A.B., M.S., *Director and Assistant Professor of Social Service.*

A.B., Radcliffe, 1935; M.S., Simmons, 1944; Medical Social Worker, Grace-New Haven Community Hospital, 1944-1949; *Director of Social Service, Duke Hospital, 1949—*

SARA HARRIETTE AMEY, A.B., *Instructor in Social Service.*

DOLORES GENRE BROWN, A.B., M.S.W., *Instructor in Social Service.*

MERLE M. FOCKLER, B.A., M.S.S.W., *Instructor in Social Service.*

DOROTHY M. JOHNSON, A.B., M.S.W., *Instructor in Social Service.*

ROSALYN BRUNSON LIGHTSEY, A.B., M.S.W., *Instructor in Social Service.*

ISABEL PELTON, A.B., M.S.S.W., *Instructor in Social Service.*

DOROTHY OVERTON POST, B.S.S.W., M.S.S.W., *Instructor in Social Service.*

JEANETTE SCHAEFER REARDON, A.B., M.S.W., *Instructor in Social Service.*

ELIZABETH WINFREY, A.B., M.S.W., *Instructor in Social Service.*

IRIS CLARK YEO, A.B., M.S.W., *Instructor in Social Service.*

ANNABEL STANFORD, A.B., M.S., *Instructor in Social Service.*

Medical and psychiatric social casework service is offered to patients referred by personnel within the Hospital, and by interested individuals and health and welfare agencies outside of the Hospital. Assistance and advice in connection with the problems presented are available to the members of the Staff and referring agencies.

The division also assists in teaching social and environmental aspects of illness and medical care through consultations and lectures to the students of the Schools of Medicine and Nursing. In addition, it serves as an agency for supervised field work for students of the Graduate School of Social Work of the University of North Carolina. Further information concerning training for advanced students may be obtained from the Social Service Division, Duke Hospital, Durham, North Carolina.

Laboratory Technique

HAYWOOD MAURICE TAYLOR, B.S., M.S., Ph.D., *Professor of Toxicology and Associate Professor of Biochemistry (Director).*

GEORGE MARGOLIS, A.B., M.D., *Associate Professor of Pathology (Associate Director).*

DAVID TILLERSON SMITH, A.B., M.D., *Professor of Bacteriology and Associate Professor of Medicine.*

OSCAR CARL EDVARD HANSEN-PRÜSS, A.B., M.D., *Professor of Medicine in Charge of Clinical Microscopy.*

DUNCAN CHARTERIS HETHERINGTON, A.B., M.A., Ph.D., M.D., *Professor of Anatomy.*

NORMAN FRANCIS CONANT, B.S., A.M., Ph.D., *Professor of Mycology and Associate Professor of Bacteriology.*

RALPH WAYNE RUNDLES, A.B., Ph.B., M.D., *Associate Professor of Medicine.*

IVAN W. BROWN, JR., A.B., B.S., M.D., *Assistant Professor of Surgery.*

MARY ALVERTA POSTON, A.M., *Associate in Bacteriology.*

HOYLE W. CRAIG, *Technical Associate in Bacteriology.*

PRESTON W. SMITH, *Technical Associate in Hematology.*

LEO B. DANIELS, *Technical Associate in Biochemistry.*

The course in laboratory technique, which includes training in blood chemistry, clinical microscopy, bacteriology, serology, basal metabolism, etc., is approved by the Registry of Technicians of the

American Society of Clinical Pathology. The course lasts twenty-one months, the next class starting September, 1953. The registration fee is \$300 which includes tuition, student health and diploma fee for the entire course. There are no additional fees except for breakage. Other student activity fees are optional. The students live in town at their own expense. A minimum of two years of approved college work is required. The degree of B.S. in Medical Technology is awarded upon successful completion of the course. Information as to the specific requirements may be obtained from Dr. Haywood M. Taylor, Duke Hospital, Durham, N. C.

X-Ray Technology

ROBERT JAMES REEVES, A.B., M.D., *Professor of Radiology and Chairman of the Department.*

GEORGE JAY BAYLIN, A.B., M.D., *Professor of Radiology and Associate in Anatomy.*

JOSEPH A. BOYD, A.B., M.D., *Assistant Professor of Radiology.*

JOHN B. CAHOON, JR., R.T., A.S.X.T., *Technical Associate in Radiology.*

IVA LEE MCGRADY, *Technical Instructor in Radiology.*

ELAINE CHAMBERLAINE, R.T., *Technical Instructor in Radiology.*

JANE L. GOOCH, R.T., *Technical Assistant in Radiology.*

The course in x-ray technology includes training in radiographic and x-ray therapy technic. The curriculum has been planned with the thought of giving the student x-ray technician a basic knowledge of the principles involved along with an introduction to the technical aspects of radiography. Applicants for training in x-ray technology should satisfy one of the following requirements: two years of college, graduate nurse, or special student without either of these requirements who might be appointed by the committee on admissions. The course is of twelve months' duration and the following subjects are presented: Anatomy and Physiology, General and Radiographic physics, Processing and Chemistry of x-ray film and Solutions, Fundamentals of Exposure Factors, Medical Terminology, Standard and Special Positions in Radiography, X-Ray Protection and Apparatus Maintenance. The tuition fee is \$25.00 payable on admission. Other student activity fees are optional. The University educational, recreational and athletic facilities are available to the students. Students are admitted on October 1 each year. Applications should be filed by July 1st. No maintenance is provided, therefore students live in town at their own expense. A certificate is awarded to those who successfully complete the course. The course is approved by the Council on Medical Education, American Medical Association, American College of Radiology, American Registry of X-Ray Technicians and The American Society of X-Ray Technicians. For further information, write: Professor of Radiology, Duke Hospital, Durham, N. C.

Physical Therapy

HELEN LOUISE KAISER, R.P.T., *Assistant Professor of Physical Therapy in Charge of Division.*

MARY C. SINGLETON, B.S., R.P.T., *Associate in Physical Therapy.*

ENOLA S. FLOWERS, B.S., R.P.T., *Instructor in Physical Therapy.*

GRACE CUNNINGHAM, B.S., R.P.T., *Assistant in Physical Therapy.*

*JEAN A. GORDON, M.C.S.P., *Assistant in Physical Therapy.*

ELEANOR FLANAGAN, A.B., R.P.T., *Assistant in Physical Therapy.*

EDNA BLUMENTHAL, B.S., R.P.T., *Lecturer in Physical Therapy.*

NANCY P. KEPPEL, A.B., *Recreation Therapist.*

A fifteen months' course in physical therapy is offered for men and women graduates of accredited schools of physical education and nursing, and for selected applicants who have completed ninety college semester hours, including credit in the biological sciences, physics, chemistry and psychology. The curriculum provides instruction in anatomy, physiology, kinesiology, pathology, psychology, electrotherapy, neuropsychiatry, therapeutic exercise and the principles of rehabilitation. Instruction in the clinical subjects is given by members of the faculty of the School of Medicine. Clinical training will be given at Duke Hospital and affiliated institutions and includes supervision of orthopaedic problems in the Durham Public Schools. The course starts in October. The tuition fee is \$350 plus \$35 for medical fee, and does not include maintenance. A certificate is awarded upon successful completion of the course. Twenty hours of credit may be earned toward the baccalaureate degree.

In addition to the above, a six months' course in the Psychosomatic Aspects of Physical Therapy is given to registered graduate physical therapists. The course includes a study of personality structure, adjustment, tensions, anxiety and their relation to patient behavior and management. The tuition fee is \$150.00. A certificate is awarded. Courses are given to the students of the Schools of Medicine and Nursing. Further information and application blanks may be obtained from the Division of Physical Therapy, Duke Hospital, Durham, N. C.

Occupational Therapy

ELIZABETH R. WAGGONER, B.S., O.T.R., *Instructor in Occupational Therapy.*

JOANNE HAINES, A.B., O.T.R., *Assistant in Occupational Therapy.*

Occupational Therapy in the form of creative, manual, educational and recreational activities is offered to patients upon referral by their physicians. These activities are adapted to the specific remedial need of the individual patient. The division serves as a clinical training center for students from Occupational Therapy Schools.

* Member of Chartered Society of Physiotherapy, England.

Medical Record Library

J. HARNED BUFKIN, R.N., R.R.L., *Assistant Professor of Medical Record Library Science.*

BETTY S. WIGGINS, A.B., R.R.L., *Assistant Medical Record Librarian.*

A twelve months' course for the training of medical record librarians which has been given full approval of the American Association of Medical Record Librarians and the American Medical Association, includes three months of classes and nine months of internship with rotation through inter- and extra-departmental stations. Applicants are judged individually for eligibility, and education, training, and experience are all taken into consideration. The curriculum provides instruction in the theory of medical record library science, and an introduction to anatomy, physiology, pathology, medical and operative terminology, and medical diction. Instruction is given by members of the faculty of the School of Medicine, with special lectures on hospital management and correlation of various hospital departments, as well as seminars on legal aspects and administrative uses of medical case records. Internship includes application of class work in actual practice and covers all phases of medical record library work. The course starts in October. The tuition fee is \$175.00 and does not include maintenance. A certificate is awarded upon successful completion of the course. Applications may be made to the Medical Record Librarian, Box 3307, Duke Hospital, Durham, N. C.

Medical Art and Illustration

ELON H. CLARK, *Professor of Medical Art and Illustration.*

Rochester Institute of Technology, 1927-1930; Johns Hopkins School of Medical Art, 1930-1933; Instructor, Medical Art, 1933-1934; Chief, Medical Art and Photography. Veterans Administration, 1949 (leave of absence); *Chairman, Medical Art and Illustration, Duke, 1934—*

HENRY F. PICKETT, *Associate in Medical Art and Illustration.*

ROBERT L. BLAKE, *Associate in Medical Art and Illustration.*

GEORGE LYNCH, *Instructor in Medical Art and Illustration.*

ROBERT BEACH, *Medical Artist.*

GLORIA GORDON, *Letter Artist.*

RAYMOND HOWARD, *Instructor in Medical Photography.*

NEALLY WEBSTER, *Instructor in Medical Photography.*

WEAVER TRIPP, *Medical Photographer.*

ILSE EBERT, *Assistant Photographer.*

The function of this Division is to produce, for staff members allied to medicine, visual aids by way of various art and photographic methods. These visual aids are used to enhance the medical records and to aid in research and education. Services offered by this Division are: 1. Medical Art: Illustrations, by means of various artistic techniques, depicting anything perceptible to the eye, the existing but unseen and

even the theoretical, as well as mechanical drawings, diagrams, charts, graphs, lettering, casts, models, exhibits, etc. 2. Medical Photography: Illustrations of anything to which available photographic equipment will respond. This Division produces still and motion pictures, microphotographs, pictures of the retinae, photographic copies, film strips, lantern slides, enlargements and contact prints. Services offered directly for the patients' benefit are: Production of various types of anatomical prostheses and instruction in the use of opaque cosmetics. Facilities for individual training in specific techniques or methods employed by this Division are available. No academic credit is given. Prerequisites, tuition, time and type of training are determined by the Chairman of this Division. No regular courses of instruction in medical art and photography or their allied fields are offered.

School of Medicine Students



(At beginning of autumn quarter, October 5, 1953)

	First-Year	Second-Year	Junior Year	Senior Year	Total	1932-1953 Graduates
Students	79	76	79	82	316	1,415

FIRST-YEAR STUDENTS

Anderson, Herbert Charles (Massachusetts Institute of Technology, Hofstra, University of Miami), Coral Gables, Fla.
 Andrews, Billy Franklin (Wake Forest College), Graham, N. C.
 Bacon, George Edgar (Wesleyan University), Scarsdale, N. Y.
 Barnhill, Lamuel Edgar, Jr. (Duke University), Bethel, N. C.
 Barrick, Harry Welling, Jr. (Princeton University, Trinity College, Duke University), Watsonville, Calif.
 Bedell, Richard Ferrandou (Duke University), Scarsdale, N. Y.
 Blackard, William Griffith (Duke University), Asheville, N. C.
 Blount, Robert Estes, Jr. (Millsaps College), Jackson, Miss.
 Bowles, Lawrence Thompson (Duke University), Garden City, N. Y.
 Bromberg, Albert Marvin (William and Mary), Jersey City, N. J.
 Bunn, Joseph Plummer (Duke University), Tarboro, N. C.
 Cannon, Stanley Joel (Duke University), Coral Gables, Fla.
 Creighton, James Burns, Jr. (University of Florida), Tampa, Fla.
 Dulin, Thomas Leroy (Duke University), Charlotte, N. C.
 Ehtesham-Zadeh, Timor (Davis and Elkins College), Arak, Iran
 Elder, Thomas David (Duke University), Scotia, N. Y.
 Ellington, Robert Norwood (University of North Carolina), Burlington, N. C.
 Fennell, Thomas Dudley Bogges (Harvard University, University of Miami), Homestead, Fla.
 Fisher, Elbert Luther, Jr. (Duke University), Durham, N. C.
 Fulton, James Walker (Duke University), Leesburg, Va.
 Gibson, Thomas Guthrie, Jr. (Wake Forest College), Gibson, N. C.
 Givens, Dingess Monroe (Duke University), Pearisburg, Va.
 Hale, Lois Sue (University of Georgia), Decatur, Ga.
 Hall, James Samuel, Jr. (Duke University), Fayetteville, N. C.
 Harley, Eugene Lincoln (Bates College), Liberia, Africa.
 Hill, David Bennett (Wake Forest College), Rutherfordton, N. C.
 Holly, Patricia Ann (Southeast Missouri State College), Ilmo, Mo.
 Howell, Ralph Rodney (Davidson College), Concord, N. C.
 Howe, Ralph Melvin (Duke University), Fairfield, Ala.
 Hurst, Lawrence Ronald (Duke University), Matoaka, W. Va.
 James, Walter Scott, Jr. (Duke University), Waynesboro, Pa.
 Johnson, Paul Armstrong (Duke University), White Plains, N. Y.
 Karpman, Stephen Benjamin (Duke University), Washington, D. C.
 Keller, Donald Holland (Duke University, Florida Southern College), Plant City, Fla.
 Kirkman, Shirley Elizabeth (Duke University), High Point, N. C.
 Kitlowski, Edward John (Duke University), Baltimore, Md.
 Knickerbocker, Fay Ann (Duke University), Gainesville, Ga.
 Komrad, Eugene Leslie (Long Island University, Boston University), Yonkers, N. Y.
 Lackey, Dixon Alexander (Duke University), Asheville, N. C.
 LeBauer, Sidney Irvin (Duke University), Greensboro, N. C.
 Lewis, William Ralph, Jr. (University of North Carolina, University of South Carolina), Columbia, S. C.
 Longstreth, Dorothy Bevis (University of Arizona), Princeton, N. J.
 McInnis, Angus Guy, Jr. (Davidson College), Sanford, Fla.
 Moseley, Robert Galloway (Duke University), Bluefield, W. Va.
 Myrick, Sam E., Jr. (Davidson College), Jacksonville, Fla.
 O'Mansky, Boris Louis (Duke University), Leaksville, N. C.
 O'Mansky, Samuel Isaac (Duke University), Leaksville, N. C.
 O'Neill, James Frank (Vanderbilt University), Miami, Fla.
 Painter, Billy Edward (Duke University), Mt. Holly, N. C.
 Pantelakos, Constantine George (Duke University), Rocky Mount, N. C.
 Patrick, Roman Lee (Duke University), Engelhard, N. C.
 Pepper, George (Columbia University College of Pharmacy, Duke University), New York, N. Y.
 Perkins, Henry Thomas, Jr. (Duke University), Durham, N. C.
 Pillsbury, Richard Theodric, Jr. (University of North Carolina), Salisbury, Md.
 Poston, Robert Lewis (Davidson College), Rocky Mount, N. C.
 Powell, Albert Henry, Jr. (Duke University), Durham, N. C.
 Procter, William Ivan, Jr. (University of North Carolina), Raleigh, N. C.

Redmond, James Seymour, Jr. (Duke University), Asheville, N. C.
 Reese, Owen, Jr. (Davidson College), High Point, N. C.
 Ridgeway, Nathan Alvah, Jr. (Furman University), Greenville, S. C.
 Rogers, Richard Lionel (Clemson College), Hartsville, S. C.
 Roughton, Ralph Emerson, Jr. (Duke University), Sandersville, Ga.
 Sanders, Clyde Vernon, Jr. (Centenary College), Monroe, La.
 Sappenfield, Luther Cook, Jr. (Davidson College), Charlotte, N. C.
 Satterfield, George Howard, Jr. (North Carolina State College), Raleigh, N. C.
 Schulz, Harold Paul, Jr. (Menlo College, Tufts College, University of California), San Francisco, Calif.
 Schwartz, Melvin Jay (University of North Carolina), Wilmington, N. C.
 Seagle, Lee Marcus, Jr. (Davidson College), Black Mountain, N. C.
 Shingleton, Hugh Maurice (Duke University), Wilson, N. C.
 Smith, Robert Laber (Duke University), Shaker Heights, Ohio.
 Smith, Whitman Erskin, Jr. (Duke University), Albemarle, N. C.
 Solomon, Alan (Bucknell University), New York, N. Y.
 Spoto, Angelo Peter, Jr. (University of Florida), Tampa, Fla.
 Sweeney, Charles Leslie, Jr. (Cornell University), Wilmington, Del.
 Thorn, Drury Russell (University of Missouri), Kansas City, Mo.
 Weiss, Edward Bernard (University of Florida), Gainesville, Fla.
 Yancey, Henry Alexander, Jr. (Duke University), Charlotte, N. C.
 Zener, Karl Adams (Harvard University), Durham, N. C.
 Zerby, Arthur William, Jr. (Albright College, Duke University), Reading, Pa.

SECOND-YEAR STUDENTS

Allison, Ronald Eugene (Duke University), Shaker Heights, Ohio.
 Barton, Dewey Lockwood (Bates College), Hasbrouck Heights, N. J.
 Benson, Gordon Donald (Drake University, University of Minnesota), Red Lake Falls, Minn.
 Brown, Edward Brooking (Duke University), Scranton, Pa.
 Bryan, William Blair (Wake Forest College), Battleboro, N. C.
 Carmichael, Daniel Erskine (Vanderbilt University, Birmingham-Southern), Birmingham, Ala.
 Carswell, Abel Paul, Jr. (Duke University, University of North Carolina), Durham, N. C.
 Coffin, Lewis Augustus, III (University of Virginia, New York University), New York, N. Y.
 Cranford, Harold Davis (University of North Carolina), Asheboro, N. C.
 Crenshaw, Marion Carlyle, Jr. (Davidson College), Columbia, S. C.
 Culton, Julian Clark (Guilford College), Charlotte, N. C.
 Culton, Yancey Golet, Jr. (Guilford College), Charlotte, N. C.
 Davis, William Alexander, Jr. (Davidson College, North Georgia College), Charlotte, N. C.
 Deiss, Elmer Andrew, Jr. (Princeton University), Lexington, Ky.
 Dickinson, William Andrew, Jr. (Virginia Military Institute), Cape Charles, Va.
 Dorsey, Charles Laing (Virginia Military Institute), Roanoke, Va.
 Dozier, Laurie Lester, Jr. (University of Miami, University of Florida, Duke University, Florida State University), Tallahassee, Fla.
 Easterling, James Frank (University of North Carolina), Rocky Mount, N. C.
 Failing, Robert Mayo (Western Carolina Teachers College, University of North Carolina), San Marino, Calif.
 Foster, Richard Sparre (Duke University), Washington, D. C.
 Fredericks, Richard Niel (Duke University), Miami Beach, Fla.
 Freedy, Lucy Vaughan Rawlings (Wake Forest College, Wingate Jr. College, University of Southern California), Conway, N. C.
 Gehweiler, John Andrew, Jr. (Duke University), Jamaica, N. Y.
 Gibson, James Franklin (Duke University), Wilmington, N. C.
 Griffin, Harvey Lee, Jr. (University of North Carolina), Asheboro, N. C.
 Hardison, Joseph Hammond, Jr. (Sewanee Military Academy, Duke University), Raleigh, N. C.
 Hassler, William Lada (Duke University), Shaker Heights, Ohio.
 Hollett, Alan Norton (Duke University), Wilmington, Del.
 Howard, Robert Mackay (Duke University), Savannah, Ga.
 Hutchin, Peter (Duke University), Cleveland, Ohio.
 Jackson, James Robert (Wake Forest College), Fayetteville, N. C.
 Jackson, Joseph Hoyt, Jr. (Centenary College, Louisiana State University, Duke University), Shreveport, La.
 Johnson, Douglas Marion (Emory University), Durham, N. C.
 Johnson, Peggy A. (Berea College, Wayne University, University of North Carolina), Burnsville, N. C.
 Josefiak, Eugene Joseph (St. Joseph's College, University of Buffalo, Duke University), Durham, N. C.
 Kent, Horace Smith (Duke University, Arizona State College), Mesa, Ariz.
 Koger, Edward Richard (University of Florida), Hialeah, Fla.
 Lang, Frank Alexander (Duke University), Fort Lauderdale, Fla.
 Lee, Pope Matthews (Duke University), Asheville, N. C.
 Mangum, Vernon Pressley (University of North Carolina), Hamlet, N. C.
 Metropoli, Harry Jack (Duke University), Manning, S. C.
 Miller, David Edmond (Duke University), Laurinburg, N. C.
 Mostellar, Henry Curtis (Duke University), Mobile, Ala.
 Mundy, Elbert Johnson, Jr. (Duke University), Jacksonville, Fla.
 Neal, John William (Wake Forest College, University of North Carolina), Monroe, N. C.
 Newell, Bruce, Jr. (Duke University), Roxboro, N. C.
 Pearson, Hugh Oliver, Jr. (Wake Forest College), Pinetops, N. C.
 Pollock, James Harold (Duke University), Westerville, Ohio.
 Preston, Edna Anne (Woman's College, University of North Carolina), Norfolk, Va.

Ratchford, George Rufus, Jr. (Duke University), Gastonia, N. C.
 Renuart, Adhemar William (Duke University), Miami, Fla.
 Rollins, Robert LeRoy, Jr. (University of North Carolina), Farmville, N. C.
 Roseberry, Philip Leon (Duke University), York, Pa.
 Ross, James Vincent, Jr. (Duke University), Easton, Pa.
 Sanford, Virginia Oates (Woman's College, University of North Carolina, Wake Forest College), Greensboro, N. C.
 Schachter, Jerome Miles (Duke University), Durham, N. C.
 Shands, Joseph Walter, Jr. (Princeton University), Jacksonville, Fla.
 Shealy, Clyde Norman (Duke University), Camden, S. C.
 Shoemaker, Carroll Clifton (Wake Forest College), Raleigh, N. C.
 Sloan, James Marshall, III (Davidson College), Gastonia, N. C.
 Stuart, Edward George (State Teachers College, Temple University, University of Pennsylvania), West Chester, Pa.
 Steele, Richard Austin (Wake Forest College, Duke University), Asheville, N. C.
 Steiner, Sheldon Haskell (New York University), New York, N. Y.
 Sterling, Lehman Newell (Duke University), Broomall, Pa.
 Tanaka, Shin (Duke University), Durham, N. C.
 Townsend, James Joye (Duke University), Jacksonville, Fla.
 Turner, John Calhoun (Duke University), Fair Bluff, N. C.
 Vance, Thomas Doyle (Duke University), Spruce Pine, N. C.
 Walton, George Britain, Jr. (University of North Carolina), Chadbourn, N. C.
 Whanger, Alan Duane (Duke University), Cleveland, Ohio.
 Whitaker, Harry Applewhite (Davidson College), Rocky Mount, N. C.
 Wilbanks, George Dewey, Jr. (University of Florida, Duke University), Tampa, Fla.
 Wilkinson, Charles Albert (Wake Forest College), Wake Forest, N. C.
 Wilson, Colon Hayes, Jr. (Duke University), Havelock, N. C.
 Windom, Robert Emerson (Duke University), St. Petersburg, Fla.
 Young, Hadley Rasch (The Citadel), Duluth, Minn.

JUNIOR STUDENTS

Alexander, Gerald Laurence (University of Michigan, Cornell University), Brooklyn, N. Y.
 Asbill, David St. Pierre, Jr. (The Citadel), Columbia, S. C.
 Bell, Norman Howard (Emory University), Gainesville, Ga.
 Bennett, Paul Clifford, Jr. (Wake Forest College), Kinston, N. C.
 Bercovitz, Mary Carolaine (Duke University), New York, N. Y.
 Bethune, William Murphy, Jr. (Wake Forest College), Clinton, N. C.
 Bjerk, Edward Martin (Elon College), Burlington, N. C.
 Blum, Lawrence Michael (College of William and Mary), Brooklyn, N. Y.
 Bourland, William Lee (Duke University), Winter Garden, Fla.
 Bramlett, Charnner Williams (The Citadel), Spartanburg, S. C.
 Breibart, Sidney (College of Charleston), Charleston, S. C.
 Britt, Benjamin Earl (N. C. State College), Raleigh, N. C.
 Bynum, Rufus Sisson (University of North Carolina), Potsdam, N. Y.
 Calvert, Beverly Carver (University of Wisconsin, George Washington University), Los Angeles, Calif.
 Carver, David Harold (Harvard College), Chestnut Hill, Mass.
 Chamberlain, Frank Harry (Duke University), West Orange, N. J.
 Combs, Joseph John, Jr. (University of North Carolina), Raleigh, N. C.
 Cowan, David Emerson (Davidson College), Burlington, N. C.
 Crowder, Thomas Harold, Jr. (University of North Carolina), Henderson, N. C.
 Cupp, Horace B., Jr. (Emory University, East Tennessee State College, University of Tennessee), Mountain Home, Tenn.
 David, Arthur Kalil, Jr. (University of Florida, Duke University), Jacksonville, Fla.
 Deyton, Robert Guy, Jr. (Duke University), Brevard, N. C.
 Dismukes, Don Elmo (University of Mississippi), Duke Hill, Miss.
 Dukes, Herbert Trice (Duke University), Tampa, Fla.
 Farmer, John Lovelace, Jr. (Duke University), Wilson, N. C.
 Fox, Norman Albright, Jr. (Guilford College), Durham, N. C.
 Gore, John Pratt (Univ. of Richmond, Clemson College, Wake Forest College), Asheville, N. C.
 Gore, Tom Winfield (Duke University), Haleyville, Ala.
 Gorie, John Ashley (Univ. of Calif. at L.A., Stanford University, Univ. of Southern Calif. at L.A.), San Diego, Calif.
 Goswick, Claude Benjamin, Jr. (Duke University), Durham, N. C.
 Graham, Frederick William, Jr. (Duke University), Charleston, W. Va.
 Graham, John Douglas (University of North Dakota), Miami, Fla.
 Grunt, Jerome Alvin (Rutgers University, University of Kansas), Newark, N. J.
 Haim, Liam (Duke University), Durham, N. C.
 Hilgartner, Margaret Wehr (Bryn Mawr College, Duke University), Baltimore, Md.
 Ira, Gordon Henry, Jr. (Duke University), Jacksonville, Fla.
 James, Joseph McCraw, Jr. (University of North Carolina), Wilmington, N. C.
 James, Robert Earl, Jr. (East Carolina Teachers College), Bethel, N. C.
 Jelks, Allen Nathaniel (Emory University), Fort Lauderdale, Fla.
 Johnson, Harry Wallace (Duke University), Weldon, N. C.
 Johnston, Cyrus Conrad, Jr. (Duke University), Mooresville, N. C.
 Jones, Edward Lenoir (High Point College, University of N. C.), Charlotte, N. C.
 Kinneman, Robert Eugene, Jr. (Duke University), Greenfield, Ind.
 Lang, William Steve, Jr. (Armstrong College, Duke University), Savannah, Ga.
 Langley, John Thomas (University of North Carolina), Kinston, N. C.
 Langstaff, Quintus Aden (Johns Hopkins University, Peabody College), Nashville, Tenn.

Leslie, Robert Andrew (Westminster College, University of Tulsa, St. Andrews University), Bartlesville, Okla.
 Lipton, Harold Pons (Duke University), Beechurst, L. I., N. Y.
 Mandrick, Fred Harold (University of North Dakota), Williston, N. D.
 McAuley, Eurid Reid, Jr. (University of North Carolina), Charlotte, N. C.
 McCall, Ben Warren (Duke University), Jacksonville, Fla.
 Merwarth, Charles Richard (Duke University), Cranford, N. J.
 Mitchell, David Crerar (Duke University), Grosse Pointe, Mich.
 Neal, Charles Bodine, III (Duke University), Millville, N. J.
 Ocker, John McClellan, Jr. (Catholic University of America, Duke University), Durham, N. C.
 Pagter, Amos Townsend, Jr. (Duke University, George Washington University), Washington, D. C.
 Pierce, John Arthur (Duke University), Ocean Grove, N. J.
 Reeves, John Wesley, Jr. (West Virginia University), Fairmont, W. Va.
 Saunders, Donald Eugene, Jr. (University of South Carolina), Columbia, S. C.
 Scherle, Edeline Marie Landstein (Mrs. W. C. Talley), (Instituto de Segunda ensenanza del Vedado, University of Havana), Habana, Cuba.
 Silver, Donald (Duke University, Asheville-Biltmore Junior College), Asheville, N. C.
 Simon, Harold (Duke University), Trenton, N. J.
 Sledge, John Burton, Jr. (Duke University), Rich Square, N. C.
 Slocumb, Marvin Benton (Mercer University, Duke University), Macon, Ga.
 Smith, Richard Bowden (Duke University), Durham, N. C.
 Snow, John Wesley (Duke University, University of Florida), Gainesville, Fla.
 Spanel, David Louis (Princeton University, University of Pennsylvania), Princeton, N. J.
 Steagall, Robert Worth, Jr. (Duke University), Charlotte, N. C.
 Stokes, Thomas Angier, Jr. (University of North Carolina), Durham, N. C.
 Strauss, Saul (Duke University), Brooklyn, N. Y.
 Taylor, Everette Lester, Jr. (Washington and Jefferson College, Washington and Lee University, Duke University), Mount Airy, N. C.
 Thames, Thomas Byron (University of Florida), Miami, Fla.
 Watson, David Earl (Duke University), Okmulgee, Okla.
 West, Bryan Clinton, Jr. (Wake Forest College, University of North Carolina), Kinston, N. C.
 Wiggs, Eugene Overbey (Johns Hopkins University, University of Colorado, George Washington University), Washington, D. C.
 Wiita, Robert Matthew (Duke University), Monessen, Pa.
 Wilder, Buna Joe (Duke University), Daytona Beach, Fla.
 Williams, Dana Steeves (Bates College), Reading, Mass.
 Young, James Morningstar (Duke University), Massillon, Ohio.

SENIOR STUDENTS

Adamson, Jerry Eugene (West Virginia University), New Martinsville, W. Va.
 Arthur, Robert Miller (George Washington University, University of North Carolina), Hillsboro, N. C.
 Aycock, William Glenn (Duke University), Fremont, N. C.
 Ayers, John Clifford, Jr. (Duke University), Nichols, S. C.
 Barr, Frank Woodworth, Jr. (Davidson College), Charlotte, N. C.
 Barrett, John Albert, Jr. (Duke University), Mt. Holly, N. C.
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- Yudell, Robert Ben (Duke University), New Bern, N. C.

Index



Abernethy, P. M.	43	Bacos, J. M.	34
Abt, A. F.	55	Bagby Award	18
Accelerated Schedule	10, 11	Baker, L. D.	39, 61, 62
Adams, D. K.	37	Baker, R. D.	25
Adams, E. L.	63, 66	Baldwin, M.	37
Adamson, J. E.	76	Barefoot, S. W.	29
Adkins, T. F.	54	Barnard, B. A.	67
Administration, Duke Hospital	66	Barker, J.	23
Staff	63	Barnhill, L. E., Jr.	73
Committee on	62	Barnes, R. H.	36
Administrative, interns	63	Barr, F. W., Jr.	76
Internships	66	Barrett, J. A., Jr.	76
Admission, application for	13	Barrick, N. W., Jr.	73
Committee on	61	Barton, D. L.	74
Requirements for	13, 14	Bass, S.	26
Test	14	Bassett, V. H.	14
Agnello, S. A.	19	Batchelor, R. P.	15
Aims of the School	6	Batten, W.	30
Alexander, G. L.	75	Baylin, G. J.	19, 51, 61, 69
Aligood, J. W.	30	Beach, R.	71
Allison, R. E.	74	Beard, D. W.	40
Altany, F. E.	44	Beard, J. W.	24, 39, 61
Altvaeter, F. V.	14, 63	Beaumont Committee	61
Altea, E. P.	39	Becker, M. C.	32
Ambrose, S. S., Jr.	43	Becker, R. F.	19
Amenabar, R.	45	Bedell, R. F.	73
Amey, S. H.	67	Bell, W. R.	75
Anatomy	19	Belser, R. H.	46
Anderson, F. P.	56	Bennett, P. C., Jr.	8, 75
Anderson, H. C.	73	Bennett, R. L.	41
Anderson, W. B.	39	Benson, G. D.	74
Andrews, B. F.	73	Benson, W. R.	25, 60
Andrews, G. R.	37	Benton, A. L.	15
Andrews, J. P.	25	Bercovitz, M. C.	75
Anesthesiology	50	Berlin, M.	34
Angier B. Duke Memorial and		Bernheim, F. W.	22, 61
other Loan Funds	17	Bernheim, M. L. C.	20
Anlyan, W. G.	40	Berrios, A.	45
Appen, R. C.	34	Berton, W. M.	25
Application for Admission	13	Bertrand, H.	63
Anesthesiology	50	Bethune, W. M., Jr.	75
Hospital Administration	66	Bigger, I. A.	15
Internships	64	Biochemistry	19
Medical Record Library	71	Biology, Requirement in	13
Physical Therapy	70	Bishop, C.	25
Postgraduate study	65	Bishopric, G. A.	32
School of Dietetics	67	Bjerk, E. M.	75
School of Medicine	13	Blackard, W. G.	73
School of Nursing	66	Blair, E.	30
Arango, F.	44, 47	Blake, R. L.	64, 71
Arena, J. M.	55	Bleck, E. E.	46
Armstrong, P. P.	15	Bloor, B. M.	41
Arnold, R. A.	40	Blount, R. E., Jr.	73
Arthur, R. M.	76	Blum, L. M.	75
Asbill, D. S. P.	75	Blumenthal, E.	70
Ashe, J. R., Jr.	54	Board, Expenses	16
Athletic Fee	16	Bogdonoff, M.	33
Atwood, T. W.	40	Bond, G. F.	56
Auld, E. E.	42	Bondurant, S. O., Jr.	34
Ausherman, H. M.	40	Books	16
Autumn Quarter, curriculum	10	Boone, A. W.	40
Dates	5	Borden Award	17
Awards	17, 18	Committee on	62
Aycock, W. G.	76	Borders, R. W.	42
Ayers, J. C., Jr.	76	Bourland, W. C.	75
Ayerst, R.	34	Bouvard, W. C.	76
Bachelor of Science, Medicine	11	Bowers, M. A.	43
Nursing	66	Bowles, L. T.	73
Bachman, K.	56	Bowles, R. M.	56
Bacon, G. E.	73	Boyarsky, S.	46
		Boyd, J. A.	51, 69

Bradway, J. B.	59	Connar, R. G.	40
Bramlett, C. W.	75	Connor, A. M.	32
Brandy, J. R., Jr.	76	Constantine, T. M.	76
Breibart, S.	75	Coonrad, E. V.	30
Brewer, J. S.	56	Cooper, A. D.	29, 58
Brewer, J. M., Jr.	76	Cooper, C. D.	33
Brice, G. W., Jr.	56	Cooper, F. B.	45
Bridges, M.	47	Cordrey, L. J.	41
Britt, B. E.	75	Costner, A. N.	41
Broadbent, T. R.	15	Cote, R. H.	45
Brock, C. L.	76	Cowan, D. E.	75
Bromberg, A. M.	73	Craddock, A. T.	8, 76
Brower, A. S.	2	Craddock, J. G., Jr.	76
Brown, D. G.	67	Crago, J. A.	32
Brown, E. B.	74	Craig, H. W.	24, 68
Brown, I. W., Jr.	40, 68	Craig, R. L.	36
Brown, M.	51	Crane, B. C.	67
Brown, R. H.	45	Crane, G. W.	32
Brown, W. G.	58	Cranford, H. D.	74
Bruce, L. M.	57	Crawford, H.	44
Bryan, W. B.	74	Creadick, R. N.	53
Bryson, E. C.	59	Creighton, J. B., Jr.	73
Buckley, C. E., III	76	Crenshaw, M. C., Jr.	74
Buflkin, J. H.	61, 64, 71	Crenshaw, R. N.	63
Bugg, C. P.	56	Crevasse, L. E., Jr.	76
Bugg, E. I., Jr.	43	Cromwell, G. N.	63
Bunn, J. P.	73	Crouch, R. D.	44
Busse, E. W.	2, 35, 61	Crowder, T. H., Jr.	75
Butler, W. G., Jr.	54	Culton, J. C.	74
Byerly, B. H.	47	Culton, Y. G., Jr.	74
Bynum, R. S.	75	Cunningham, G.	70
Cahoon, J. B., Jr.	52, 69	Cupp, H. B.	63
Calendar	4, 5	Cupp, H. B., Jr.	75
Callaway, J. L.	27	Currens, J. H.	15
Calvert, B. C.	75	Curriculum, Committee on	61
Campbell, F. H.	42	School of Medicine	9
Campbell, M. B.	42, 64	First-year	10
Campbell, P. C.	29	Second-year	10
Cannon, S. J.	73	Third-year	10
Carmichael, D. E.	74	Fourth-year	10
Carr, H. J., Jr.	76	Cuyler, W. K.	54
Carroll, R. C.	36	D'Angelo, G. J.	11, 46
Carswell, A. P., Jr.	74	Dabney, M. Y.	14
Carter, B.	2, 53, 61, 62	Dahl, E. V.	25
Carter, D. D.	60	Dai, B.	35
Carter, N. B.	34	Danforth, C. H.	14
Carver, D. H.	75	Daniels, L. B.	21, 68
Carver, G. M.	42	Davenport, R. E.	67
Certificate, of Graduate Dietitian	67	David, A. K.	75
Chamberlain, E.	69	Davis, A. V. O.	76
Chamberlin, F. H.	75	Davis, C. D.	53
Chang, E. C.	57	Davis, W. A., Jr.	74
Charlton, J. D.	31	Davison, A. T. S.	55
Chaudhuri, S.	33	Davison, W. C.	2, 55, 61, 62
Chemistry, Requirement in	13	Davisou, W. T.	15
Chew, W.	76	Dees, J. E.	39
Chipman, S. S.	58	Dees, J. T.	57
Chittum, J. R.	47	Dees, S. C.	55
Clark, E. H.	64, 71	Degrees, B. S. (Medicine)	11
Clark, G. A.	15	B. S. (Nursing)	66
Clark, L.	61, 63	M.D.	12
Clark, L. R.	2	Deiss, E. A., Jr.	8, 74
Clark, S. L.	15	DeLaughter, G. D., Jr.	76
Clement, J. E.	8, 76	DeMaria, W. J. A.	55
Clinical Microscopy	10	Dent, S. J.	43
Clinics, Out-patient	7	Dentistry	49
Private Diagnostic	7	Departments of Instruction	19-60
Cobb, C. H.	63	DePass, S. W.	76
Coffey, R. B.	46	DeTurk, W. E.	23
Coffin, L. A.	74	Deyton, R. G., Jr.	8, 75
Cohen, H. J.	76	Diagnostic Clinic	7
Cohen, L. D.	36	Dick, M.	23, 28
Cohn, J. E.	33	Dickinson, W. A., Jr.	74
Cole, B. T.	23	Dicks, R. L.	63
Collins, J. P.	39	Dietetics, School of	67
Combs, J. J., Jr.	75	Dillon, M. L., Jr.	42
Commencement, Dates	5	Dimas, A.	32
Fees	16	DiMichele, J. D.	26, 46
Committees	2, 61-62	Diploma of Graduate Nurse	66
Committee on Health Affairs	2	Fees	16
Conant, N. F.	24, 58, 61, 68	Dismukes, D. E.	75

Dean, C. A.	15	Floyd, M. A.	76
Doctor of Medicine	12	Forbus, W. D.	2, 25, 59, 60, 61, 62
Donovan, D. L.	31	Foreword	3
Doolittle, R. C.	45	Forrester, E. N.	76
Dorsey, C. L.	74	Foster, A. A.	37
Dovenmuehle, R. H.	38	Foster, R. S.	74
Dozier, L. L., Jr.	74	Fourth-Quarter Schedule	10
Duckett, H. C., Jr.	54	Fourth-Year Students	76
Duda, G. S.	21	Fowler, J. A.	36
Duke, Angier B. Memorial	17	Fox, N. A., Jr.	75
Duke, J. B.	6, 13	Fredericks, R. N.	74
Duke, K. L.	19	Free Time	10
Duke Hospital, Administration	63	Freedy, L. V. R.	74
Facilities	7	Fridovich, I.	21
Dukes, H. T.	75	Fulton, J. W.	73
Dulin, T. L.	73	Fulton, M. N.	15
Dunlap, E. B., Jr.	14	Funds, Loan	17
Durham VA Hospital, Committee	61		
		Gailey, H. A.	46
Eadie, G. S.	22	Gardner, C. E.	38, 61, 62
Eagan, J.	34	Gardner, G. H.	15
Eagle, W. W.	39	Garrett, A. S.	63
Easley, E. B.	53	Garrett, F.	37
Easterling, J. F.	74	Garrett, N. H.	31
Eastwood, F. T.	56	Garrett, S. R.	45
Ebert, I.	71	Gartner, L. D.	46
Eckert, E. A.	24, 41	Gauer, O.	22
Echeverri, H.	63	Gavardin, M. B.	41
Edens, A. H.	2	Gehweiler, J. A., Jr.	74
Egan, L.	66	General Statement	6
Ehtesham-Zadeh, T.	73	General Surgery	47
Elder, T. D.	73	Georgiade, N. G.	43
Electives	10	Gibbes, J. H.	15
Elfmon, S. L.	29	Giblin, D.	34
Elliott, J. F.	76	Gibson, J. F.	74
Ellington, R. N.	73	Gibson, T. G., Jr.	73
Emlet, J. R.	41	Gibson, W. C.	58
Engel, F. L.	27, 61	Gill, A. J.	15
English, Requirement in	13	Gillin, J.	37
Entrance, Requirements for	13	Givens, D. M.	73
Epperson, J. H.	58	Glaide, A. J.	21
Equipment Fees	16	Glasson, J.	43
Estes, E. H., Jr.	31	Gleason, W. L.	34
Everett, J. W.	19	Glenn, L. A.	51
Examinations, Clinical	10	Golden, J. B.	43
Expenses, School of Medicine	16	Goldner, J. L.	40
		Goldsmith, J.	37
Facilities of the Hospital	7	Goldstone, S.	37
Failing, R. M.	74	Gooch, J. L.	69
Farley, W. W.	56	Gordon, G.	71
Farmer, J. L., Jr.	75	Gordon, G. S.	33
Farrar, J. D.	7, 63	Gordon, J. A.	70
Farrar, M. P.	7, 63	Gore, J. P.	75
Fawcett, B.	42, 60	Gore, T. W.	75
Fees, Athletics	16	Goree, J. A.	75
Equipment	16	Goswick, C. B., Jr.	75
General	16	Gould, K. G., Jr.	76
Nat'l Board Med. Exam.	16	Government, Student	8
School of Medicine	16	Gowdy, R. A.	42
School of Nursing	66	Graham, F. W., Jr.	75
Fell, S. C.	44	Graham, J. D.	75
Fellowships, Frederic M. Hanes	17	Graham, W. A.	54
Felts, J. R., Jr.	63	Green, P.	54
Fennell, T. D. B.	73	Grekin, R.	31
Ferguson, G. B.	41	Griffin, H. L., Jr.	74
Fetter, B. F.	25	Grimson, K. S.	38, 62
Fillmore, P.	31	Gross, P. M.	2
Final Clinical Examinations	10	Grun, J. A.	19, 75
Finch, C. B.	76	Gunn, C. G.	31
First-year curriculum	10	Gynecology	53
Students	73		
Fischer, E. L.	63	Hadley, W. P.	56
Fisher, E. L., Jr.	73	Hahn, D. A.	56
Fisher, M. L.	36	Hajberg, G. H.	75
Fitzgerald, W. C.	30	Haim, L.	75
Fitzhugh, A. S., Jr.	56	Haines, J.	70
Flanagan, E.	70	Hair, T. E., Jr.	76
Flanagan, J. F.	34	Hakala, M. T.	21
Fletcher, R. V.	15	Hale, L.	73
Foeckler, M. M.	68	Hall, F. G.	2, 22, 62
Flowers, E. S.	70	Hall, H. E.	41

Hall, J. S.	73	Izlar, H. L., Jr.	33
Haltiwanger, E., Jr.	44	Jackson, B. T.	77
Hamblen, E. C.	53	Jackson, J. H.	74
Hamrick, L. W., Jr.	31	Jackson, J. R.	74
Handler, P.	20	Jackson, M. T.	52
Hanes, F. M. Fellowships ..	17	Jacobansky, A.	2
Hansen-Prüss, O. C. E.	27, 68	Jacobs, J. E.	41
Hansen, A. E.	15	Jager, T.	15
Hardison, J. H., Jr.	74	James, C. A.	77
Harley, E. L.	73	James, J. M., Jr.	75
Harmon, J. B.	19, 45	James, R. E., Jr.	75
Harris, G. P.	63	James, W. S., Jr.	73
Harris, J. S.	20, 55, 58, 61	Javer, J. M.	45
Harrison, G. M.	56	Javitt, N. B.	77
Hart, D.	2, 38, 61, 62	Jeans, P. C.	15
Harvey, W. W., Jr.	76	Jelks, A. N.	75
Hassler, W. L.	74	Jelks, E.	14
Haugen, R. K.	25	Jenscn, W. N.	28
Health Affairs, Committee ..	2	Johnson, A. N.	56
Health, Student	8	Johnson, D.	25
Hedge, R. H., Jr.	76	Johnson, D. M.	68, 74
Hejl, A.	47	Johnson, H. W.	75
Helmick, C.	58	Johnson, P. A.	73, 74
Helms, W. K., Jr.	76	Johnston, C. C., Jr.	75
Hendrix, J. P.	61, 62	Johnston, D. H.	31
Herring, H. J.	2	Johnston, R. L.	15
Herron, E. A.	63	Jonasson, T.	34
Hetherington, D. C.	19, 68	Jones, C. P.	54
Hewitt, W. C., Jr.	76	Jones, E. E., Jr.	37
Hiatt, J. S., Jr.	30	Jones, E. L.	75
Hickam, J. B.	28	Jones, J.	34
Hilgartner, M. W.	75	Jones, J. D.	8, 77
Hill, D. B.	73	Jones, P. H., Jr.	15
Hill, P. E.	77	Jones, W. B.	77
Hillman, C. H.	54	Jordan, C. E.	2
Histology	10	Josefiak, E. J.	74
Hobgood, R. N.	63	Junior, Medicine	35
Hohman, L. B.	2, 36, 61, 62	Students	75
Holden, A. B.	77	Surgery	47
Holland, B. C.	29	Kaiser, H. L.	62, 64, 70
Holland, H. C.	77	Kamin, H.	21
Hollett, A. N.	74	Karpman, S. B.	73
Hollinshead, W. H.	15	Keith, M. J.	37
Holly, P. A.	73	Keller, D. H.	73
Holman, E. F.	14	Kelley, J. M., Jr.	8, 77
Hook, F. R.	45	Kelly, J. W.	15
Hooker, D.	15	Kelly, R. A., Jr.	77
Horne, F. G.	43	Kelser, G. A., Jr.	33
Horne, S. F.	30	Kempner, W.	27
Hornsby, A. P.	51	Kenaston, T. C., Jr.	77
Horsley, H. T.	77	Kent, H. S.	74
Hospital, Administration, School of ..	66	Keppel, N. P.	70
Administrative Committee ..	62	Keppel, R. A.	47
Facilities	7	Kerby, G. P.	29
Records, Committee	61	Kerim, A. A.	52
Staff	63	Kerner, J. W.	14
Horton, C. E.	44	Kernodle, D. R.	47
Hours of study	10	Kernodle, G. W.	56
Howard, R.	71	Kerr, R.	54
Howard, R. M.	74	Kicklighter, G.	67
Howell, R. R.	73	King, J. T.	56
Howse, R. M.	73	King, J. T., Jr.	15
Huber, D. S.	77	Kinneman, R. E.	75
Huckabee, E.	62	Kipnis, D. M.	33
Hudmon, I. S., Jr.	77	Kirby-Smith, H. T.	15
Hull, W.	23	Kirkland, E. S.	51
Huntley, B. F.	52	Kirkman, S. E.	73
Hurst, L. R.	73	Kitlowski, E. J.	73
Husted, A. P.	46	Kline, B. S.	15
Hutchin, P.	74	Knickerbocker, F. A.	73
Illustration, Medical	71	Knight, J. A.	56
Immunology	10	Koger, E. R.	73
Instruction, Departments of	19-60	Komrad, E. L.	74
Schedule of	10-11	Kornhouser, S. I.	15
Internships	64	Korres, S.	21
Hospital Administration	66	Koury, G. E.	32
Postgraduate	65	Kubie, L. S.	15
Ira, G. H., Jr.	75	Kubzansky, P. E.	38
Isley, J. K.	52	Kunkle, E. C.	28
Irwin, C. E.	42		

LaBarre, W.	37	Markham, C. B.	2
Laboratory, Technique, Course in	68	Martin, E. W.	62, 63, 66
Lack, L.	21	Martin, R. C.	40
Lackey, D. A.	73	Martin, S. P.	24, 28, 61
Lang, W. S., Jr.	75	Martinat, E. H.	47
Lang, F. A.	74	Martziloff, K. H.	15
Langley, H.	23	Masters, F. W.	41
Langley, J. T.	75	Mattox, H. W., Jr.	77
Langstaff, Q. A.	75	Mayer, W. F.	15
Larsh, J. E., Jr.	58	Mays, O. A.	46
Larson, C. Jr.	14	Mebane, G. Y.	77
Laundry, expenses	16	Medical, Art and Illustration	61
Leach, C. E.	15	Care	8
LeBauer, S. I.	73	Humanities	11
Lee, P. M.	74	Record Library	71
Legal Medicine and Toxicology	59	Service Courses	66
Lestlie, R. A.	76	Social Service	67
Lewis, C. P., Jr.	43	Medicine	27
Lewis, J. H.	29	Doctor of	12
Lewis, W. R., Jr.	73	Junior and Senior	35
Library	7	Melamed, M. R.	33
Committee on	61	Melton, R. A.	77
Record	71	Menefee, E. E., Jr.	28
Lieberman, A. H.	33	Merck Award	18
Lightsey, R. B.	68	Merwarth, C. R.	76
Linberg, E. J.	42	Metropol, H. J.	74
Lipton, H. P.	76	Microbiology	24
Lister, L. M.	33	Miller, B. N.	15
List of Medical Students	73-77	Miller, D. E.	74
Loan Funds	17	Miller, O. L.	42
Logan, W. D.	44	Mitchell, D. C.	76
London, A. H., Jr.	55	Mitchener, C. C.	30
Long, E. C.	57	Mundy, E. J., Jr.	74
Longino, F. H.	42	Mizuhara, S.	21
Longstreth, D. B.	73	Moore, P.	57
Lord, J.	34	Morgan, J. L.	56
Losin, S.	77	Morgan, T. E., Jr.	77
Love, E.	67	Morishige, S.	57
Lowenbach, H.	62	Morris, F. A., Jr.	45
Ludlow, E. A.	36, 61, 77	Mortimore, G. E.	18
Lupton, E. S.	30	Mosby Awards	73
Lyday, W. D.	47	Moseley, R. G.	74
Lynch, G.	71	Mostellar, H. C.	15
Lyons, C. K.	42	Mulholland, H. B.	33
Lynch, T. F.	21	Murdaugh, H. V., Jr.	55
		Murphy, R. J.	33
MacColl, W. A.	15	Musgrove, R. E.	47
McAlister, J. H.	51	Mycology	24
McAuley, E. R., Jr.	76	Myers, J. D.	28, 61
McBryde, A. M.	55	Myrick, S. E., Jr.	73
McBryde, J. A.	63		
McCall, B. W.	76	Nat'l Board of Medical Examiners	16
McCall, J. B., Jr.	54	Neal, C. B.	76
McCall, M. A.	57	Neal, J. B.	74
McCann, W. S.	15	Neill, W. R.	44
McCauley, R. T.	46	Nestor, V.	67
McClure, C.	31, 45	Neurosurgery	50
McCracken, J.	30	Newborg, B. C.	30
McCrea, F. D.	23	Newell, B., Jr.	74
McDonald, C. T.	47	Newman, E. G.	77
McGavran, E. G.	58	Niblock, F. C., Jr.	57
McGerity, J. L.	77	Nicholson, W. M.	27, 62
McGill, C.	15	Nixon, P. I.	15
McGowand, J. L.	77	Nowill, W. K.	40
McGrady, I. L.	69	Nugent, G. R.	47
McInnis, A. G., Jr.	73	Nursing, School of	66
McIntosh, H. D.	32	Nyun, M. T.	21
McLean, W. T.	56		
McPherson, H. T.	31	Obstetrics	53
McPherson, S. D.	41	Occupational Therapy	70
McWhorter, R. L., Jr.	33	Ocker, J. M., Jr.	76
Mabry, H. F.	63	Odom, G. L.	39, 61
Magee, G. F.	77	Oglesby, K.	63
Magnusen, F.	38	O'Mansky, B. L.	73
Maguire, C. P.	44	O'Mansky, S. I.	73
Major, R. H.	15	O'Neill, J. F.	73, 77
Malik, A. J.	63	Ophthalmology	48
Mandrick, F. H.	76	Orgain, E. S.	27
Maness, P. F.	56	Ormandy, R.	40
Mangum, V. P.	74	Orthopaedics	48
Margolis, G.	25, 61, 63	Osler, W.	7
Markee, J. E.	2, 13, 19, 61, 62		

Osterhout, S.	24, 34	Public Health	58
Otolaryngology	48	Pudenz, R. H.	14
Out-patient clinic	7	Pugh, A. E.	29
Committee on	61	Pyne, J. M.	62, 63
Page, E. B.	33	Quarters	5, 10
Pagter, A. T., Jr.	76	Radiology	51
Painter, B. E.	73	Ramachandra, V.	43
Palmer, H. V.	45	Ramage, R. C.	15
Palumbo, L.	53	Ramey, J. W.	77
Pantelakos, C. G.	73	Rancy, R. B.	42
Parasitology	10	Rankin, R. B., Jr.	47
Parker, E. E., Jr.	15	Rankin, W. S.	63
Parker, J. B.	36	Raper, E. S.	63
Parker, M. V.	57	Rast, C. L., Jr.	32
Parker, W. M.	66	Ratchford, G. R., Jr.	75
Parkerson, G. R., Jr.	34	Ray, H. L., Jr.	43
Partrick, R. L.	73	Reamer, I. T.	63
Partridge, E.	51	Reardon, J. S.	68
Pathology	25	Record Library	71
Patients, Public Ward and Private	7	Records, Committee on	61
Patrick, S. I.	52	Redmond, J. S., Jr.	74
Patton, R. G.	77	Reese, O., Jr.	74
Paulin, J. E.	14	Reeves, J. W., Jr.	76
Pearse, R. L.	54	Reeves, R. J.	2, 51, 61, 64, 69
Pearson, H. O., Jr.	74	Regional Representatives	14
Pediatrics	55	Regulations, Fees and Expenses	16
Peele, T. L.	19, 28	Renault, A. W.	75
Peete, C. H., Jr.	54	Rent, rooms	16
Pelton, I.	60, 68	Representatives, Regional	14
Penfield, W.	14	Requirements, B.S. degree (Med.)	11
Penrod, K. E.	2, 23, 61	B.S., Nursing	66
Pepper, G.	73	Entrance	13, 14
Perkins, H. T., Jr.	73	M.D. degree	12
Perry, A. F. R.	51	School of Dietetics	67
Perry, S. P.	51	School of Nursing	66
Persons, E. L.	8, 28, 58, 61, 62	Research Fellowships	17
Peschel, E.	29	Residencies	64
Peschel, R. L.	32	Postgraduate	65
Pfeiffer, J. B., Jr.	28	Reynolds, D. H.	45
Pfizer Award	18	Rice, A. D.	56
Pharmacology	22	Richardson, W. P.	58
Physical Diagnosis	10	Ridgeway, N. A., Jr.	74
Physical Therapy	70	Rippy, G. C., Jr.	77
Committee on	62	Robbins, J. G.	32
Physics, Requirement in	13	Rogers, E. S.	25
Physiology	22	Rogers, R. L.	74
Pickens, M. I.	63	Roll of Students	73-77
Pickett, H. F.	64, 71	Rollins, R. L., Jr.	75
Pickett, J. P.	25	Room Rent	16
Pickrell, K. L.	38, 62	Roseberry, P. L.	75
Pierce, E. C., Jr.	34	Rosemond, R. M.	57
Pierce, J. A.	76	Ross, J. V., Jr.	75
Pierson, G. H., Jr.	77	Ross, N. F.	41, 61
Pillsbury, R. T., Jr.	73	Ross, R. A.	53
Pinsker, H.	77	Rothschild, C.	21
Plastic Surgery	49	Rothstein, L. M.	77
Podger, K. A.	54	Rowe, C. R., Jr.	44
Pollard, L. E. F.	77	Roughton, R. E., Jr.	74
Pollard, L. W., Jr.	34	Rucker, M. P.	53
Pollock, J. H.	8, 74	Ruffin, J. M.	27, 61
Poole, A. K.	14	Rundles, R. W.	28, 61, 68
Pope, H.	24, 58	Rupp, J. C.	21
Porter, F. R.	2, 61, 62, 63	Saberg, A. E.	38
Post, D. O.	68	Saito, M.	57
Postgraduate study	65	Salem, M. E.	44
Poston, M. A.	24, 68	Sanchez, R.	45
Poston, R. L.	73	Sanders, C. V., Jr.	74
Porter, C. R., Jr.	77	Sanford, V. O.	75
Powell, A. H., Jr.	73	Sanger, B. J.	15
Powell, C. P.	31	Sappenfield, L. C., Jr.	74
Powers, K. D.	54	Satterfield, G. H., Jr.	74
Prall, C. E.	63	Saunders, D. E., Jr.	8, 76
Preiss, J.	21	Schacter, J. M.	75
Preston, E. H.	74	Schedule of Instruction	10
Preventive Medicine	58	Scherle, E. M. L.	76
Private Diagnostic Clinic	7	Schiebel, H. M.	41
Proctor, W. L., Jr.	73	Schlayer, C.	32
Pruce, M. M.	38	Schock, P.	32
Pryor, W. W.	31	Scholarships	17
Psychiatry	35		
Psychobiology	10		

School of Dietetics	67	Stickel, D. L.	35
Hospital Administration	66	Stocker, F. W.	15, 40
Medicine	67	Stokes, T. A., Jr.	76
Nursing	66	Strauss, S.	76
Physical Therapy	70	Stuart, E. G.	75
Schulz, H. P., Jr.	74	Student Government	8
Schwartz, M. J.	74	Student Technicians, Committee on	61
Schwartz, T. B.	29	Students, List of	73
Schwert, G. W., Jr.	21	First-year class	73-74
Science, Bachelor of Medicine	11	Fourth-year class	76
Bachelor of Nursing	66	Second-year class	74
Scientific Journals	7	Third-year class	75
Seagle, L. M., Jr.	74	Study, Postgraduate (Medicine)	65
Sealy, W. C.	39, 61	(Nursing)	66
Seavey, P.	35	Styron, C. W.	29
Second-year, curriculum	10	Suitt, R. B.	36
Students	74	Sullivan, W. E.	15
Semans, J. H.	39	Summary of Curriculum	11
Semans, Mrs. J. H.	61	Summer Quarter	5
Semmes, R. E.	15	Superstine, E.	63
Senior Medicine	35	Surgery	38
Students	76	Junior and Senior	47
Surgery	47	Sutton, W.	35
Shands, J. W., Jr.	75	Swanson, L. E.	62, 63
Shapiro, O. W.	77	Sweeney, C. L., Jr.	74
Sharpe, D. G.	40	Swett, Mrs. F. H.	61
Shealy, C. N.	75	Syphilology	35
Sherman, S. M.	21	Sznol, M.	47
Sherrill, J. F., Jr.	52	Takenaka, Y.	21
Sherwood, M. M.	56	Takeshima, N.	43
Shingleton, H. M.	74	Talley, W. C.	77
Shingleton, W. W.	40, 61	Tanaka, S.	75
Shivers, O. G.	56	Tannehill, A. W., Jr.	77
Shoemaker, C. C.	75	Tarazi, A. K.	47
Slugerman, E. H.	77	Taylor, A.	51
Shumate, B.	67	Taylor, C. R.	43
Sieker, H. O.	34	Taylor, E. L., Jr.	76
Silbergeld, S.	77	Taylor, E. W.	47
Silver, D.	76	Taylor, H. G.	24, 55
Silver, G. A.	36, 61	Taylor, H. M.	20, 61, 68
Silverman, A. J.	37	Taylor, W. A.	63
Simon, H.	76	Taylor, W. M.	15
Sing, R. L., Jr.	77	Technicians, Comm. on	61
Singletary, W. V.	30	Terms, dates	5
Singleton, M. C.	70	Terrell, E.	35
Sinskey, R. M.	45	Terrell, T. E.	35
Skarupa, J. A.	63	Thames, T. B.	76
Skinner, B. S.	56	Third-year, curriculum	61
Skipworth, G. B.	77	Students	75
Sledge, J. B., Jr.	76	Thomas, W. J.	43
Sloan, J. M., III	8, 75	Thomas, W. L., Jr.	53, 61
Sloumb, M. B.	76	Thomson, H. S.	47
Smith, A. G.	25	Thompson, A. W.	54
Smith, D. T., 2, 17, 24, 27, 53, 59, 61, 62,	68	Thompson, M. D.	15
Smith, J. B. K.	37	Thoracic Surgery	50
Smith, J. L.	44, 63	Thorne, D. R.	74
Smith, L. G.	52	Thrash, W.	63
Smith, P. W.	32, 63	Tickle, D. R.	77
Smith, R. B.	76	Titus, B. R.	43, 64
Smith, R. L.	74	Townsend, J. J.	75
Smith, S. G.	24	Toxicology	59
Smith, W. E.	74	Trent, J. C., Award	18
Snow, J. W.	76	Society	13
Social Service	67	Trimble, J. R.	32
Committee on 62	62	Tripp, W.	71
Solomon, A.	74	Tuition, Medical Record Library	71
Spach, M. S.	8, 77	School of Medicine	16
Spanel, D. L.	76	School of Nursing	66
Spoto, A. P., Jr.	74	School of Physical Therapy	70
Spring Quarter	5	School of X-ray Technology	69
Staff, Administrative and Technical	63	Trumbo, R. B.	44
Medical School and Hospital	19-60	Turner, J. C.	75
Stallings, T. L., Jr.	77	Turner, V. H.	53
Stanford, A.	63	Undergraduate Cancer Program	60
Stanley, D. G.	56	Urology	48
Stead, E. A., Jr.	2, 27, 61, 62	Vacation Dates	5
Steagall, R. W., Jr.	76	Vallotton, W. W.	45
Steele, R. A.	75	Van Arsdall, C. A.	34
Steiner, S. H.	75		
Stelling, F. H.	42		
Stephen, C. R.	39, 63		
Sterling, L. N.	75		

Vance, T. D.	75	Williams, A. M.	44
Verner, J. V., Jr.	77	Williams, D. M.	58
Vestal, T. A.	54	Williams, D. S.	76
Veterans Hosp. Committee	61	Williams, J. L., Jr.	47
Vigil, R. A.	43	Williams, K. T.	77
Von Roebel, C.	54	Wilson, C. H., Jr.	75
Waggoner, E. R.	64, 70	Wilson, F. K.	2, 62, 66
Walch, F. R.	52	Wilson, J. W.	34
Walker, R. P.	34	Wilson, W. P.	37
Walton, G. B., Jr.	75	Windon, R. E.	75
Wannamaker, W. H.	2	Winfrey, E.	68
Wansker, B. A.	34	Winter Quarter	5
Wanzer, S. H.	77	Wolter, J. M.	34
Waring, J. I.	15	Woodhall, B.	39
Warren, D. E.	34	Woods, A. H.	34
Warren, J. V.	27	Woodward, G. S.	54
Watson, D. E.	76	Woolsey, D. S.	15
Watson, G. A.	56	Wray, J. B.	47
Webster, N.	11	Wrenn, F. R.	43
Weeks, K. D.	30	Wrenn, R. N.	46
Weiss, E. B.	74	Wright, DeW.	62, 63
Welch, G. H., Jr.	35	Wright, J. J.	58
Wells, R. H.	44	Wylie, R. M.	15
Werke, E. E., Jr.	32	X-ray technology	69
West, B. C., Jr.	76	Yancey, H. A., Jr.	74
Wester, T. B.	56	Yeo, I. C.	68
Weston, W.	15	Young, G.	26
Whanger, A. D.	75	Young, D. A.	37
White, B. A.	51	Young, H. R.	75
Whitaker, H. A.	75	Young, J. M.	76
Whitehorn, C. A.	46	Young, W. G.	44
Whitesides, E. S.	46	Yudell, R. B.	77
Wien, J.	62, 64, 67	Zacarian, S. A.	33
Wiggins, B. S.	70	Zavaleta, A. A.	46
Wiggs, E. O.	76	Zechman, F.	23
Wiita, R. M.	76	Zeliff, J. E.	57
Wilbanks, G. D., Jr.	75	Zener, K. A.	74
Wilder, B. J.	76	Zerby, A. W., Jr.	74
Wilkinson, C. A.	75		
Willett, R. W.	34		



BULLETIN
OF
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The College of Engineering

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Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

For BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

For BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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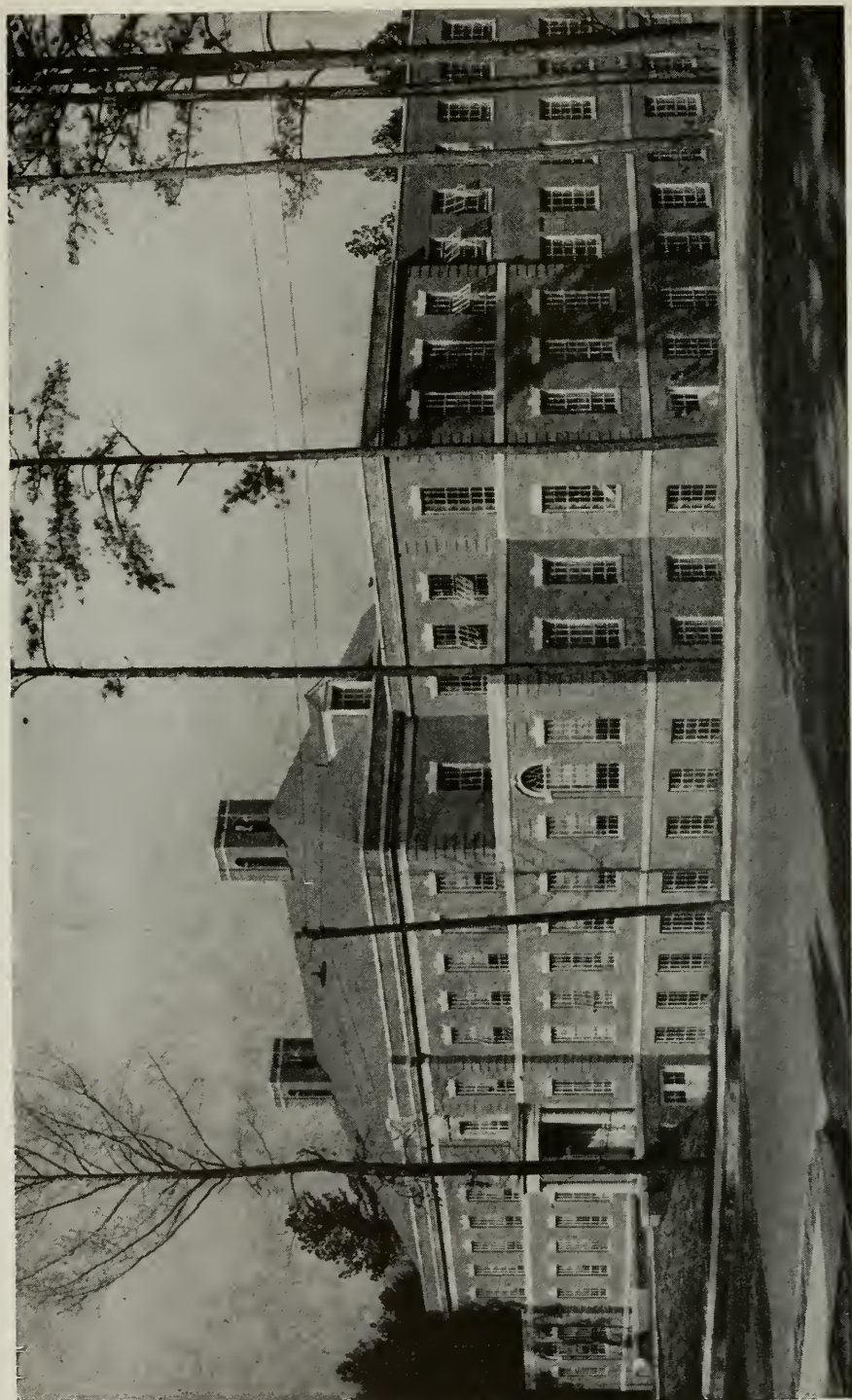
COLLEGE OF ENGINEERING

1953-1954

ANNOUNCEMENTS FOR 1954-1955

DURHAM, NORTH CAROLINA

1954



ENGINEERING BUILDING

Contents



	PAGE
Calendar of the Colleges.....	4
The College of Engineering.....	5
Officers of the College.....	8
Officers of Administration.....	8
Engineering Faculty Council.....	8
Trustee Committee on Engineering and Research.....	8
Officer Emeritus	9
Officers of Instruction.....	9
Other Officers	10
Admission	11
Financial Information and Living Accommodations.....	14
Reserve Officers Training Corps.....	19
Bureau of Testing and Guidance.....	21
Appointments Office	22
Registration and Academic Regulations.....	23
Activities	27
Degree of Bachelor of Science in Engineering.....	30
Department of Civil Engineering.....	35
Staff and Facilities.....	35
Curriculum	37
Courses of Instruction.....	38
Department of Electrical Engineering.....	41
Staff and Facilities.....	41
Curriculum	45
Courses of Instruction.....	46
Department of Mechanical Engineering.....	49
Staff and Facilities.....	49
Curriculum	53
Courses of Instruction.....	54

Calendar of the Colleges



1954

- September 16. Thursday, 7:30 p.m. Assembly for all entering freshmen; Freshman Orientation begins.
- September 16. Thursday, 7:30 p.m. Assembly for transfer students entering Trinity College and the College of Engineering.
- September 20. Monday. Registration and matriculation of former students of Trinity College and the College of Engineering who have not pre-registered.
- September 21. Tuesday. Registration and matriculation of new students with advanced standing, Woman's College.
- September 22. Wednesday. Final registration of pre-registered students.
- September 23. Thursday. Fall semester classes begin.
- October 26. Tuesday. Examination in English Usage.
- November 8. Monday. Last day for reporting mid-semester grades.
- November 24. Wednesday, 5:00 p.m. Thanksgiving recess begins.
- November 29. Monday, 8:00 a.m. Classes are resumed.
- December 11. Saturday. Founders' Day.
- December 18. Saturday, 12:30 p.m. Christmas recess begins.

1955

- January 3. Monday, 8:00 a.m. Classes are resumed.
- January 15. Saturday, 12:30 p.m. Fall semester classes end.
- January 18. Tuesday. Final examinations begin.
- January 28. Friday. Final examinations end.
- January 31. Monday. Registration and matriculation of new students.
- February 1. Tuesday. Last day for matriculation for the spring semester.
- February 2. Wednesday. Spring semester classes begin.
- March 16. Wednesday. Last day for reporting mid-semester grades.
- March 26. Saturday, 12:30 p.m. Spring recess begins.
- April 4. Monday, 8:00 a.m. Classes are resumed.
- May 20. Friday, 5:00 p.m. Spring semester classes end.
- May 23. Monday. Final examinations begin.
- June 2. Thursday. Final examinations end.
- June 4. Saturday. Commencement begins.
- June 5. Sunday. Commencement Sermon.
- June 6. Monday. Graduating Exercises.

The College of Engineering



THE College of Engineering offers the student full four-year courses in Civil, Electrical, and Mechanical Engineering. The curricula of the three departments lead to the degrees of Bachelor of Science in Civil, Electrical, and Mechanical Engineering respectively. All three curricula are fully accredited by the Engineers' Council for Professional Development, which is the ultimate authority of the engineering profession on educational standards; by the Regents of the State of New York; and by other national and regional accrediting groups. Each curriculum requires 148 semester hours of work, four of which are in physical education. In addition to the technical subjects necessary to a student in his chosen career, the programs include courses in related work, studies in certain non-engineering fields considered beneficial to him as a citizen and professional man, and the privilege of electing for himself courses in which he is personally interested.

Instruction in engineering subjects began at Duke University in 1887. Separate departments in civil and electrical engineering were established in 1927; instruction in mechanical engineering began in 1930. This arrangement led in 1937 to the establishment of the Division of Engineering, which included the separate Departments of Civil, Electrical, and Mechanical Engineering. In 1939 the Division composed of these three departments was incorporated into the University structure as the College of Engineering, one of the three coordinate undergraduate colleges of Duke University.

The college exists as part of a university community in which the student has full opportunity to take part. It has a unique role in this community as the center of individual education for certain undergraduates, but as a member of the University the college shares in the extensive facilities of laboratory and field work, superior physical equipment, great libraries, and able faculties which only a major university can provide. It shares the same campus with the Graduate School of Arts and Sciences, the Law School, the Medical and Nursing Schools, the Divinity School, the School of Forestry, and the Duke Hospital. A wide range of activities—religious, intellectual, cultural, social, and athletic—is open to the entire University community. At the same time there are other activities and organizations designed specifically for members of the College of Engineering. The student may thus enjoy both the activities and the atmosphere of a small col-

lege and the broader facilities and challenges provided by the existence of a university community.

The College of Engineering provides for the specialized interests of its students by offering professional training in technical fields. At the same time it recognizes the importance of the study of the humanities because it realizes that the engineer has definite responsibilities as a citizen and that these responsibilities cannot be properly stressed in the purely technical curricula. Engineering students, therefore, participate in the academic and extracurricular life of the liberal arts college as well as in the training and campus activities peculiar to their own college.

Whether in the classroom or on the campus the emphasis is on the individual. To this end, classes are kept small in size and close contact between professor and student is encouraged. Instructors, counselors, advisers, and administrative officers are interested in the student as a person. In turn the student is expected to accept the responsibility of contributing to his own development, to his college, and to his university. The relationship of mutual service between the individual student and his college is designed to develop men of intelligence, integrity, and culture. From this relationship there has grown through a century and more a sense of achievement and high competence that enables Duke men and women to make their place in the world as effective citizens whatever their careers may be.

The Engineering Faculty Council considers and legislates on questions of curricula and adopts regulations concerning those educational, professional, and administrative matters pertaining exclusively to the College of Engineering. The Dean of the College of Engineering serves as Chairman of the Council. The membership includes also the President of the University, the Vice-President in the Division of Education, the Dean of Undergraduate Studies, the Secretary of the Council, the Chairman and one additional representative from each department of engineering, the Assistant to the Dean of Engineering, and three members from the University Faculty representing departments in which engineering students are required to take work.

The College is on the West Campus in a modern building that was first occupied in January 1948. It has a total volume of 1,200,000 cubic feet and provides a floor area of 70,000 square feet. Each of three wings houses the laboratories and the special classrooms of one of the three engineering departments. The main portion of the building has offices, classrooms, and other general facilities.

Provided in the building for the use of all three departments of engineering are a number of general facilities.

LIBRARY: The Engineering Library contains a growing collection of 20,000 volumes on engineering and closely related subjects, and in addition subscribes to approximately 300 periodicals, of which 134 are

bound each year. The well-lighted reading room has seating accommodations for 62 students. Engineering students also have full access to the University Library, to the Woman's College Library, and to the various departmental libraries.

LECTURE ROOM: An attractively decorated lecture room, seating 216 people, permits audio-visual instruction of large groups and provides a convenient place for meetings of professional societies.

CLASSROOMS: There are nine well-lighted classrooms seating an average of 30 students per room.

DRAFTING ROOMS: Five drafting rooms that accommodate an average of 30 students each facilitate work in the various courses in which graphic methods are taught and employed.

MIMEOGRAPHING AND BLUE-PRINTING: A special room is furnished with equipment for reproducing printed matter and diagrams by either mimeographing, blue-printing, or white-printing.

PHOTOGRAPHIC DARK ROOM: In a separate room are facilities for processing a wide variety of photographic material used to supplement course instruction.

STUDENT LOUNGE: A convenient lounge is provided for the use of students.

ENGINEERING PUBLICATIONS ROOM: The staff of the *DukEngineer*, official student-published magazine of the College of Engineering, has its headquarters in the building.

CONFERENCE ROOM: A room is furnished for conference work by faculty committees, other special conferences, and student interviews with visiting industrial personnel representatives.

Officers of the College for the Year 1953-54



Officers of Administration

ARTHUR HOLLIS EDENS, B.Ph., A.M., M.P.A., Ph.D. LL.D. <i>President of the University</i>	West Campus
PAUL MAGNUS GROSS, B.S., A.M., Ph.D. <i>Vice-President in the Division of Education</i>	Hope Valley
CHARLES EDWARD JORDAN, A.B., LL.D. <i>Vice-President in the Division of Public Relations</i>	813 Vickers Avenue
HERBERT JAMES HERRING, A.B., A.M., LL.D. <i>Vice-President in the Division of Student Life</i>	Myrtle Drive
WALTER JAMES SEELEY, E.E., M.S. <i>Dean and Director of Research and Development, College of Engineering</i>	1005 Urban Avenue
ALAN KREBS MANCHESTER, A.B., A.M., Ph.D. <i>Dean of Undergraduate Studies</i>	Myrtle Drive
ROBERT B. COX, A.B., A.M. <i>Dean of Undergraduate Men</i>	1107 Ninth Street
LANIER W. PRATT, M.A. <i>Assistant Dean of Trinity College in Charge of Freshmen</i>	2007 Ruffin Street
LEWIS J. McNURLEN, M.A. <i>Assistant Dean of Freshmen, Trinity College</i>	1818 Glendale Avenue
EVERETT BROADUS WEATHERSPOON, A.B. <i>Director of Admissions</i>	125 Pinecrest Road

ENGINEERING FACULTY COUNCIL

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Vice-President PAUL MAGNUS GROSS.
Dean ALAN KREBS MANCHESTER.
Chairman: DEAN WALTER JAMES SEELEY.
Assistant to the Dean: EDWARD K. KRAYBILL.
Civil Engineering: J. W. WILLIAMS, AUBREY E. PALMER.
Electrical Engineering: CHARLES R. VAIL, OTTO MEIER, JR.
Mechanical Engineering: VAN L. KENYON, FREDERICK J. REED.
Economics: ROBERT S. SMITH.
English: GEORGE C. HARWELL.
Mathematics: JOHN J. GERGEN.
Secretary: EVERETT B. WEATHERSPOON.

COMMITTEE OF THE BOARD OF TRUSTEES ON ENGINEERING AND RESEARCH

E. L. JONES, E. W. WEBB, B. E. JORDAN, H. C. DOSS,
A. H. SANDS, JR., N. A. COCKE.

Officer Emeritus

HAROLD CRUSIUS BIRD, Ph.B., C.E.

Professor Emeritus of Civil Engineering

1209 Virginia Avenue

Officers of Instruction

INSTRUCTIONAL STAFF

KIRO PETE ARGES, B.S. in C.E., M.S. in C.E.

Instructor in Civil Engineering

915 Lambeth Circle

GILMORE BOWERS, B.S. in E.E.

Instructor in Electrical Engineering

2305 Prince Street

*CHANDLER WILCOX BROWN, B.S. in C.E.

Instructor in Civil Engineering

Rt. 1, Cornwallis Road

†WADE GILLIES BROWN, A.B.

Lecturer in Sanitary Engineering

1317 Arnette Avenue

FRANK NICHOLAS EGERTON, A.B., A.M., E.E.

Assistant Professor of Electrical Engineering

411 N. Gregson Street

ERNEST ELSEVIER, B.S. in M.E., M.S. in M.E.

Assistant Professor of Mechanical Engineering

Rt. 1, Hillsboro, N. C.

C. DARBY FULTON, JR., B.E. in M.E., Sc.D.

Assistant Professor of Mechanical Engineering

1507 W. Pettigrew Street

WILLIAM H. GARDNER, JR., B.S. in C.E., M. Engg.

Assistant Professor of Civil Engineering

2108 Cole Road

HOWARD N. HAINES, B.S.

Visiting Assistant Professor of Civil Engineering

2307 Club Boulevard

†WILLIAM HOLLAND HALL, A.B., A.M., B.C.E., M.S.C.E.

J. A. Jones Professor of Engineering

922 Urban Avenue

RAY WALTER HOLLAND, B.S. in M.E., M.S. in M.E.

Assistant Professor of Mechanical Engineering

2528 Glendale Avenue

VAN LESLIE KENYON, B.S. in M.E., M.M.E.

*Associate Professor of Mechanical Engineering**Acting Chairman, Department of Mechanical Engineering* Rt. 2, Hillsboro, N. C.

†EDWARD K. KRAYBILL, B.S. in E.E., M.S.E., E.E.

*Assistant Professor of Electrical Engineering**Assistant to the Dean of Engineering*

900 Dacian Avenue

RALPH E. LEWIS, B.S. in M.E., M.S. in M.E.

Assistant Professor of Mechanical Engineering

1401 Alabama Avenue

IAN MACCONOCHIE, B.S. in M.E.

Instructor in Mechanical Engineering

1400 Alabama Avenue

OTTO MEIER, JR., B.S. in E.E., M.S., E.E.

Associate Professor of Electrical Engineering

916 Monmouth Avenue

HARRY A. OWEN, JR., B.E.E., M.S.E.

Assistant Professor of Electrical Engineering

Hillendale Road

AUBREY E. PALMER, B.S. in Engg., C.E.

Associate Professor of Civil Engineering

2519 State Street

* Resigned February 1, 1954.

† Spring Semester, 1953-54.

† Absent on sabbatical leave, fall semester, 1953-54.

- ROBERT F. PIERRY, B.S. in C.E.
Instructor in Civil Engineering Rt. 1, Cornwallis Road
- *DAVID RABIN, B.S. in M.E., LL.B., LL.M. (Pat.)
Instructor in Mechanical Engineering Duke University
- FREDERICK JEROME REED, M.E., M.S.
Associate Professor of Mechanical Engineering 2203 Englewood Avenue
- WALTER JAMES SEELEY, E.E., M.S.
James B. Duke Professor of Electrical Engineering
Chairman, Department of Electrical Engineering
Dean and Director of Research, College of Engineering 1005 Urban Avenue
- WALTER G. SMITH, B.S. in M.E.
Part-time Instructor in Mechanical Engineering 2842 Chapel Hill Road
- †WILLIAM BREWSTER SNOW, B.S. in C.E., M.S., Sc.D.
Associate Professor of Civil Engineering 1022 West Trinity Avenue
- PAUL C. STOTILEMYER, B.S. in C.E., M.S. in Hyd. Engg.
Instructor in Civil Engineering 835 Louise Circle
- KENNETH J. THARP, B.S. in C.E.
Instructor in Civil Engineering Apt. 03, 821 Demerius Street
- ROBERT L. THURSTONE, B.S. in E.E., M.S. in E.E.
Instructor in Electrical Engineering Chapel Hill, N. C.
- CHARLES ROWE VAIL, B.S. in E.E., M.S. (E.E.)
Associate Professor of Electrical Engineering
Executive Officer, Department of Electrical Engineering 900 Dacian Avenue
- †ARTHUR REMINGTON WHITE, JR., B.S. in C.E.
Instructor in Civil Engineering Rt. 1, Cornwallis Road
- LESLIE CLIFFORD WILBUR, B.S., M.S.
Assistant Professor of Mechanical Engineering Rt. 3, Hillsboro, N. C.
- RALPH SYDNEY WILBUR, B.S. in M.E., M.E.
Professor of Mechanical Engineering 1018 Demerius Street
- JAMES WESLEY WILLIAMS, A.B., B.S. in C.E., M.S.
Associate Professor of Civil Engineering
Acting Chairman, Department of Civil Engineering 206 Swift Avenue
- Instruction in Non-Engineering subjects is given by members of the General Faculty listed in the Bulletin of Undergraduate Instruction.

Other Officers

- MRS. ETHEL LONG KALE
Librarian 3325 Chapel Hill Road
- MRS. DOROTHY H. McELDUFF, A.B.
Recorder 100 Forest Wood Drive
- JOSEPH PHILIP EDWARDS
Laboratory Technician in Electrical Engineering 1604 B Street
- JOSEPH STEVENSON HOCUTT
Laboratory Technician in Mechanical Engineering Rt. 1, Hillsboro
- ALONZO G. VAUGHAN
Laboratory Technician in Civil Engineering 208 Adams Street

* Spring Semester, 1953-54.

† Resigned August 31, 1953.

Admission to the College



APPPLICANTS may qualify for admission as members of the freshman class or as students with advanced standing. Since the enrollment is limited, the Committee on Admissions selects students who, in its judgment, are best qualified to benefit from the educational advantages which the College offers. The Committee bases its decision on the academic record of the applicant, on test scores, and on satisfactory evidence of good character and general fitness for college life at Duke. A personal interview with an officer of the University or a designated alumnus or alumna is of material benefit to the Committee and the applicant.

ADMISSION TO THE FRESHMAN CLASS: An applicant for admission to the freshman class must present at least fifteen acceptable units of secondary-school credit. A unit of credit is allowed for a course of study pursued throughout an academic year in an accredited secondary school, provided five recitations a week have been held and the prescribed amount of work has been completed satisfactorily.

For admission to the College of Engineering seven of the fifteen units must be in English (3 units), physical science (1 unit), algebra ($1\frac{1}{2}$ units), plane geometry (1 unit), and solid geometry* ($\frac{1}{2}$ unit). The remaining eight units are elective. At least five of them must be in English, foreign language, history and social studies, mathematics, and natural or physical science. It is recommended that these five be chosen from the following list:

English (in addition to the required 3 units)	1 unit
Algebra (in addition to the required $1\frac{1}{2}$ units)	$\frac{1}{2}$ unit
Trigonometry	$\frac{1}{2}$ unit
Physics or chemistry or biology (in addition to the required unit)	1 to 3 units
Foreign languages	1 to 4 units
†History and social studies	1 to 3 units

The three additional units needed to make the total of fifteen may be chosen from the subjects listed above or they may be selected at large from the following table, which gives the subjects acceptable for entrance credit and the maximum credit acceptable in each subject:

* Any deficiency in this requirement must be made up before the beginning of the sophomore year.

† Applicants who do not present at least one acceptable unit of history must take history in college.

English	4	Zoology	1
Latin	4	General Biology	1
Greek	3	Physical Geography	1
German	3	General Science	1
French	3	Agriculture	2
Spanish	3	Mechanical Drawing	2
Mathematics	4	Shop Work	2
History and Social Studies	4	Art	1
Physics	1	Music	1
Chemistry	1	Commercial Subjects	3
Botany	1		

ADMISSION TO ADVANCED STANDING: An applicant for advanced standing must have fulfilled the equivalent of the requirements for admission to the freshman class, must present official certificates of all work completed in other institutions, and must have an honorable dismissal from each institution previously attended. Credit for work completed will be determined in relation to the curriculum requirements of the College of Engineering.

Applicants for advanced standing should present, as far as possible, subjects corresponding to those required by the College. They may not, during their first semester, register for more than the minimum number of hours required of the class which they enter, except by permission of the Dean.

Transfer credits are tentatively evaluated pending the completion of two semesters of work in residence. To validate provisional credits, the student must earn at least an average of C in a normal load of work. Transfer grades of C or above are rated at one quality point per credit hour when validated. Credits with grades of D are not acceptable.

The maximum amount of credit acceptable from a junior college is sixty semester hours, exclusive of physical education. No credit is given for work completed by correspondence, and credit for no more than six semester hours is allowed for extension courses. Any extension work accepted must be specifically approved by the Dean.

ADMISSION OF SPECIAL STUDENTS: Upon the approval of the Dean, students of mature age may be admitted for special work in such courses of instruction as they are qualified to take. They may not be admitted as candidates for a degree in a regular course unless they meet all normal requirements for admission.

ADMISSION PROCEDURE: Application for admission to the College of Engineering should be made to the Director of Admissions of Trinity College and the College of Engineering. Application forms and instructions will be sent to the applicant. It is the responsibility of the applicant to see that these forms are properly executed and, together with other requested material, sent promptly to the Director.

Application prior to the final year of the secondary school course is not required. Formal steps looking toward admission should be

initiated, however, early in the senior year. Applicants for admission are requested to file all credentials by March 1. Candidates will be notified as decisions are made.

A graduate of an accredited school who submits fifteen acceptable units of secondary-school subjects, who is recommended by his principal, and who otherwise meets the requirements of the Committee on Admissions may be admitted without examination. The certification and recommendation must be on blanks furnished by the University and signed by the principal of the school in which the applicant completed his course. An applicant who presents fifteen acceptable units for admission from a non-accredited school is required to validate these units by entrance examinations and such other tests as the College may prescribe.

READMISSION OF FORMER STUDENTS: A student who, following withdrawal from College, desires to return should apply to the Director of Admissions of Trinity College and the College of Engineering. When applying for readmission the student should make a detailed statement of his activities since leaving Duke University.

WOMEN STUDENTS: Women enrolled in the College of Engineering live on the woman's campus and are subject to the general regulations of the Woman's College.

Financial Information and Living Accommodations



FEES paid by the students cover only a part of the cost of their instruction and of the operations of the University. Income from endowment and contributions from the alumni, alumnae, and other public-spirited men and women meet the balance, which constitutes more than half the total cost.

Fees

A registration fee of \$20.00 is required of all new students. This fee is payable only once; it is not refundable. A room deposit of \$25.00 is also required of all new students. A tuition fee of \$175.00 and a general fee of \$75.00 are payable at the beginning of each semester. The general fee is in lieu of special fees usually charged for matriculation, use of laboratories, student health service, commencement, etc.

Because of rising costs a readjustment in charges, including room-rents, is being considered. In the event of an adjustment applicants will be notified.

An advance deposit of \$25.00 is required of all students in residence at the time of spring registration in order to reserve a place in classes for the fall semester. This is applied toward payment of the general fee at the opening of the fall semester. The deposit will be refunded to students whom the University does not permit to return. Students who of their own volition fail to return are not entitled to a refund.

An advance deposit of \$25.00 is also required of old students who have been out of school for one or more semesters and have been accepted for readmission. It is applied toward payment of the general fee for the semester of readmission. The advance deposit is paid at the time of notification of acceptance and is not refundable.

An Air Force ROTC deposit of \$20.00 is required of students enrolling in Air Science to cover possible loss of military equipment issued to them. This deposit is refunded to the student upon return of issued equipment.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and

after the fifteenth day all fees are considered as earned and no refunds are made.

Students who register during the regular academic year for no more than two courses with a maximum credit of 8 semester hours are classified as special students. They are charged a registration fee of \$5.00 for each course, and \$12.00 for each semester hour of course credit. Students taking nine or more hours are charged full fees.

Auditors are permitted to attend classes provided they secure the consent of the instructor. They submit no daily work, take no examinations, and receive no credit. Students taking a full program and paying full fees may audit one or more courses without charge. Students not paying full fees are charged \$10.00 for each course each semester.

Students are entitled to one transcript free of charge. Additional copies are supplied at \$1.00 each. Records are not released when the Treasurer's Office reports an unpaid account.

Students may have their bills sent to parents or guardians provided the Treasurer has been notified in writing with sufficient antecedence. Failure of a student or of a parent or guardian to pay bills on the dates scheduled will debar the student from class attendance until his account is settled in full; subsequent withdrawal does not entitle him to a refund. No student is considered by the Faculty as a candidate for graduation until he has settled with the Treasurer for all his indebtedness to the University. A student who has not settled all his bills with the Treasurer is not allowed to stand the final examinations of the academic year.

Estimated Expenses for an Academic Year

Incidental expenses depend upon the tastes and habits of the individual, but the actual necessary expenses for an academic year are as follows:

	<i>Low</i>	<i>Moderate</i>	<i>Liberal</i>
Tuition	\$350.00	\$ 350.00	\$ 350.00
General Fee	150.00	150.00	150.00
Room Rent	100.00	125.00	175.00
Board	375.00	450.00	500.00
Laundry	25.00	30.00	35.00
Books	30.00	40.00	50.00
	<hr/>	<hr/>	<hr/>
	\$1030.00	\$1145.00	\$1260.00

The actual fees and expenses necessary for one year in residence as a student in Trinity College or the College of Engineering need not exceed \$1030.00.

Student Aid

Duke University is interested in students with ability and ambition. It is the aim of the University Scholarship Committee and others affiliated with the Student Aid Program to provide, insofar as possible, the financial assistance required by worthy students. This assistance takes various forms. The actual cost to the University for each student exceeds the tuition and fees collected by approximately \$400.00 per year. The deficit is paid out of contributions and income from endowment. Scholarships and prizes enable students with inadequate resources to reduce the amount payable to the University. Loans are made available, and through the Student Employment Offices part-time jobs are arranged. Through the Student Aid Program an earnest effort is made to eliminate the economic status of the student as a criterion for admission.

Scholarships, Scholastic Awards, Loans, Student Employment

For details concerning scholarships, awards, loans, and student employment see the *Bulletin of Undergraduate Instruction*.

Living Accommodations for Men

Craven, Crowell, Few and Kilgo Quadrangles on the West Campus are reserved for undergraduate men. Kilgo Quadrangle is reserved for freshmen. The Quadrangles contain 33 divisions known as Houses, each House being designated by a letter of the alphabet, thereby including House A through House HH. The rooms are equipped as single rooms and as double rooms. In some areas communicating doors between rooms permit the use of rooms as suites for 3 or 4 persons. The rental charge for a single room is \$87.50 each semester. The rental charge for a double room is \$125.00 each semester, or \$62.50 for each occupant each semester.

Undergraduate men are required to live in the residence houses unless they are married, or are living with parents or close relatives. Any exceptions must be approved by the Dean of Men.

Rooms may be reserved by new applicants only if they have been officially accepted for admission by the University and if they have paid a room deposit of \$25.00. The initial room reservation deposit is effective for the period of continuous residence. It will be refunded within 30 days after the student's graduation. Upon the withdrawal of an accepted applicant or of an enrolled student prior to graduation the room deposit is refundable provided the Housing Bureau is noti-

fied at least 60 days prior to the beginning of the term for which the room is reserved.

A resident student, in order to retain his room for the succeeding semester, must make application at the office of the Housing Bureau for confirmation of the reservation. In order to secure a refund of his initial room deposit, he must cancel his room reservation 60 days prior to the registration date of the semester for which the room was reserved. All rooms which have not been reserved on or before an announced date will be considered vacant for the succeeding semester and will be reserved in the order in which applications are made.

Rooms are rented for no shorter period than one semester or, in the case of a medical student, one quarter, unless by special arrangement with the Housing Bureau. A period of occupancy other than a semester or quarter and without special arrangement will be charged at a minimum rate of \$25.00 or at a rate of \$1.00 each day of occupancy.

The exchange of rooms may be arranged at the Housing Bureau within 15 days after the official opening of the semester or quarter of the school term. Thereafter a charge of \$2.00 may be made. Persons exchanging rooms without the approval of the Housing Bureau will be subject to charges for both rooms.

The authorities of the University do not assume responsibility for the persons selected as roommates. Each student is urged to select the roommate when the room is reserved.

Beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are furnished by the University. The student supplies linens, blankets and pillows. Rugs, if desired, are not to exceed 50 square feet in size.

Duke University desires to provide for its students a residential environment conducive to academic achievement, the development of high ideals, and sound character. The institution asks and believes that each student will contribute to this end by arranging his personal belongings in an orderly manner, by caring for the buildings and furniture as he would do in his own home, and by observing a code based on gentlemanly behavior in an educational environment which demands respect for all residents. Regulations governing the occupancy of rooms will be supplied directly from the Housing Bureau when the room reservations are made. Occupants are expected to abide by these regulations.

Living Accommodations for Women

Undergraduate women are required to live in the residence houses of the Woman's College unless they are living with parents or close relatives in the city.

Dining Service

The dining facilities on the West Campus include three cafeterias with multiple-choice menus, and the Oak Room where full meals and *a la carte* items are served. The cost for the academic year ranges from \$375.00 to \$500.00, depending on the tastes of the individual. On the East Campus dining halls are located in the Union and in Southgate. Resident women may not board elsewhere than at these halls. The charge for board is \$200.00 per semester, payable at the time of registration.

In the Men's Graduate Center there is a cafeteria with multiple-choice menus and a Coffee Lounge where sodas and sandwiches are served from 11:30 A.M. to 11:00 P.M. The prices in these dining rooms are the same as on the West Campus.

Reserve Officers Training Corps



THROUGH the Naval and Air Force Reserve Officers Training program the University is cooperating with the Department of Defense in the effort to provide a steady supply of well-educated officers for the active and reserve forces of the nation.

The Naval Reserve

There are two basic programs through which students can qualify for Naval commission upon graduation: one, the Regular Naval Reserve Officers Training Corps program, provides a maximum of four years in the University largely at government expense, followed by a temporary commission in the regular Navy or Marine Corps; the other, the Contract program, leads to a commission in the Naval Reserve or the U. S. Marine Corps Reserve.

THE REGULAR STUDENT—Scholarships are awarded on the basis of an annual nation-wide test and selection procedure. Students selected are appointed Midshipmen, USNR, and receive for a maximum of four years tuition, fees, and textbooks at government expense plus retainer pay at the rate of \$600 per year. The regular midshipman may take any course leading to a baccalaureate or higher degree with certain exceptions, e.g., pre-medicine and medicine, pre-theological and theological, music and art. His academic program must include 24 semester hours of naval science and a minimum of 3 semester hours of physics. In addition, 3 semester hours of trigonometry will be required if he has not previously completed such a course in a secondary school. The Regular goes on two summer training cruises aboard ship and receives aviation and amphibious indoctrination at naval shore stations the third summer.

Upon graduation he must accept a commission as Ensign, USN, or Second Lieutenant, USMC, if offered, after which he serves on active duty with the fleet for three years, if required by the Secretary of the Navy. Toward the end of the required active duty, he may request retention in the regular Navy or Marine Corps, or at his option be commissioned in the Reserve. Officers commissioned in the Reserve under such an option may be released to inactive duty except in times of national emergency.

THE CONTRACT STUDENT—The contract student is selected

from those regularly enrolled in Duke University who desire to qualify for a commission in the Naval or Marine Corps Reserve while pursuing their normal courses of study. There is no restriction on the course of study which a contract student may pursue; nor is he required to take college physics while in the program. He must include in his academic program trigonometry (if not successfully completed in secondary school) and 24 semester hours of naval science. He has the status of a civilian who has entered into a mutual contract with the Navy and is not eligible for the benefits and retainer pay received by regular Midshipmen. He is paid a subsistence allowance during his last two years in the NROTC, however, amounting currently to 90 cents per day. He goes aboard ship for one summer training cruise, normally between his junior and senior years. Upon graduation, he is commissioned in the Naval or Marine Corps Reserve and, if needed, reports for two years' sea service. Upon completion of the minimum active service requirements he may request transfer to the regular component of the Navy or Marine Corps, retention on active duty as a reservist, or transfer to the inactive reserve for a period of six years.

Both Regular and Contract midshipmen are deferred from Selective Service by virtue of their commitment to serve on active duty after graduation. The Navy furnishes necessary uniforms and equipment. Uniforms are worn only on drill days or other special occasions when prescribed by the Professor of Naval Science. Regular and Contract students receive the same instruction and wear the same uniforms. No distinction is made between the two, except in the handling of their records.

The Air Force Reserve

The unit functions as a regular department of instruction known as the Department of Air Science. It selects and trains students who possess the requisite character, intelligence, desire, and sense of duty to become Air Force officers.

For enrollment in the Basic Course (freshman and sophomore years) the student must: be a male citizen of the United States; be physically qualified under standards prescribed by the Air Force (due allowance will be made for defects which are correctible prior to the student's eligibility for appointment as a commissioned officer); be accepted by the institution as a regularly enrolled student; be not less than 14 years of age and not have reached 23 years of age at the time of enrollment; and successfully complete such general survey and screening tests as may be prescribed. Students initially entering the University who have had previous preparatory or high school military training are normally accepted in Basic Air Science at the same academic level as that in which they are accepted by the University.

For enrollment in the Advanced Course (junior and senior years) the student must: have successfully completed the Basic Course or have had at least one year of honorable service in the Armed Forces of the United States; execute a written agreement with the government to complete the Advanced Course *and accept a commission in the United States Air Force Reserve*, contingent upon remaining in school, and to attend the Advanced Summer Camp at the time specified; not have reached 27 years of age at the time of initial enrollment in the Advanced Course; successfully complete such general survey and screening tests as may be prescribed; and be selected by the Professor of Air Science and Tactics and the appropriate authority of the University.

All uniforms, texts, and training equipment required for the Air Science Course are furnished at government expense, and students are paid a total of approximately \$600.00 for the two years of the Advanced Course.

Since the primary need of the Air Force is for flying officers, the great majority of students selected for Advanced Air Science must be physically qualified and desirous of applying for flying training after graduation. Upon graduation and completion of the Advanced Course, selected students will be offered commissions as Second Lieutenants in the Air Force Reserve. Reserve officers who desire lifetime careers in the Regular Air Force may apply for regular commissions after serving on active duty for one year.

Students in the Basic Course may be deferred from Selective Service upon satisfactory completion of one semester of Basic Air Science. Advanced students are eligible for deferment as soon as they are enrolled formally in the Advanced Course. Selection for deferment is made by a board composed of representatives from the AFROTC and the University.

The Bureau of Testing and Guidance



THE University maintains a Bureau of Testing and Guidance which provides a centralized program of educational, vocational, and personal counseling for students. In addition, the Bureau administers special group testing programs for University schools and departments and serves as the local testing center for a wide variety of national testing programs. The Bureau also carries on programs of research in the field of measurement and counseling. Although the counseling, testing, and research services of the Bureau are designed primarily to meet the needs of the students, the faculty, and the staff

of Duke University, these services are made available to individuals and organizations outside the University as its facilities permit. Requests for further information should be addressed to the Director, Bureau of Testing and Guidance, Duke Station, Durham, N. C.

Appointments Office



THE Appointments Office is a service agency designed to aid graduates in solving the problem of post-college employment. Its primary function is to serve as an intermediary between students and prospective employers. It acquaints students with possibilities in business and professional fields; it assembles comprehensive records on each registrant and makes these records available to appropriate representatives; and it arranges interviews with prospective employers. The data assembled for individual records include academic achievement, training, experience, extracurricular activities, and honors. On occasion additional information of a specialized nature is secured. Confidential letters of recommendation are incorporated in the file of each registrant. The Office initiates contacts for students or co-operates with students who make contacts through personal efforts or through various departments of the University. It aids the registrant in directing his search to a field appropriate to his aptitude, training, and interest.

There are two major divisions of the Office: the Commercial Division, which handles all matters involving contacts with business and professional areas not related to formal education; and the Educational Division, which concerns itself with teaching and school administration positions at all levels. Students and alumni may register with either or both of these divisions.

The Office receives more calls for qualified personnel than it can supply from its registrants. It is to the mutual advantage of the students and the Office that a complete record of registrants be assembled by the fall of the senior year.

Registration and Academic Regulations



ORIENTATION PROGRAM: All freshmen and transfer students are required to participate in the activities of Orientation Week. The program includes general ability, achievement, and placement tests, orientation lectures, physical examinations, social events, special religious services, registration, and enrollment.

The University considers the planning of a course of study to be of primary importance. A specially trained corps of advisers, therefore, is made available for consultation. The tests enable the counsellor to plan a program adapted to the ability, achievements, and goals of the individual student. New students who miss the whole or a part of the Orientation Program place themselves at a serious disadvantage at the very outset of their college career.

MATRICULATION AND REGISTRATION: Students in residence are required to pay an advance deposit of \$25.00 for the following year on or before the date set for spring registration. Students who do not select their courses for the following year at the time appointed must pay a fee of \$5.00 to the Treasurer of the University before their course cards may be approved for the fall. Students whose course cards have been approved in the spring may matriculate by mail during the summer. With the exception of the advance deposit, the same regulations apply to registration for the spring semester.

Students who register in either semester at a date later than that prescribed in the calendar of this Bulletin must pay to the Treasurer a fee of \$5.00. They are counted as absent in the work they have missed in the courses to which they are admitted, and these absences carry the same penalty as do other absences from the course. Changes in courses for reasons not arising within the University require a payment of \$1.00 for each change made. No course may be elected later than two weeks after the opening of the semester, and no student may be admitted to any class without an enrollment card.

General Academic Regulations

QUANTITY CREDIT AND COURSE LOAD: The term of credit used is the semester hour, which signifies one recitation a week throughout the semester. Three hours of laboratory work are equivalent to one hour of class work. Two semesters of seventeen weeks

each constitute the academic year. For the degree of Bachelor of Science in Engineering, credit for 148 semester hours is required.

In the College of Engineering the normal load is 18 semester hours, exclusive of physical education. No student is permitted to take less than 14 semester hours of work without special permission from the Dean or to take more than the normal load of work unless his average grade in the preceding semester is higher than C.

QUALITY CREDIT: The requirements for the degree are computed not only in semester hours but also in quality points. Quality points are earned by a student on the basis of his grades: for an A he receives three quality points for each semester hour; for a B, two quality points for each semester hour; for a C, one quality point for each semester hour; for a D, no quality points. Credit for at least 148 quality points is required for a degree in Engineering.

To be eligible for graduation, a student of the senior class must complete the work of his senior year with a minimum average grade of C regardless of his average grade in preceding years.

CLASS STANDING: A student to rank as a sophomore must have to his credit at least 30 semester hours and 30 quality points; as a junior, at least 68 semester hours and 68 quality points; and as a senior, at least 106 semester hours and 106 quality points.

ACADEMIC PROGRESS: The minimum standards of academic progress outlined in the *Undergraduate Bulletin*, adapted to the engineering requirements for graduation, apply to all students in the College of Engineering. Inasmuch as progress in engineering is conditioned by course sequence, it may be necessary for the Dean of the College upon the recommendation of the appropriate engineering department to apply more specific criteria.

A student of the senior class, irrespective of his average grade in preceding years, must, in order to be eligible for graduation, complete the work of his senior year with a minimum average grade of C.

RESIDENCE REQUIREMENT: A minimum of 36 semester hours of senior-level work in the College of Engineering must be earned in residence. A student who meets this requirement but who still lacks six to eight semester hours in final fulfillment of requirements may take this work in another institution of approved standing provided that the course is approved by the head of the department concerned and by the Dean. His grades on this work must not be below C.

Grading, Attendance, Reports, Dismissal, and Examinations

GRADING: Grades shall indicate one of four conditions:

(1) Passed. A grade of A, B, C, or D shall indicate that a student has passed a course. The work of this group of students is graded

according to the following system: A, exceptional; B, superior; C, medium; D, inferior.

(2) Failed. A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class. He may not take a second examination until he has repeated the course.

(3) Incomplete. (a) A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. (b) Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

(4) Absent from final examination. (a) The grade X indicates that the student was absent from the regularly scheduled examination. (b) If the absence is excused by the Dean, the student may receive an examination upon the payment of a fee of \$3.00 to the Treasurer of the University. The instructor concerned arranges for the examination. (c) A student with an X grade who has not obtained a passing grade before the end of the semester following that in which the X was incurred is regarded as having failed in the course concerned and must repeat the work in class in order to receive credit. (d) If a student's absence from an examination is not excused by the Dean, his grade for the course concerned shall be recorded as F.

If a student drops a course without permission from the Dean, the grade for that course shall be recorded as F. If he drops with permission a course in which he is failing at that time, the grade for that course shall be recorded as F unless, in the judgment of the Dean, circumstances do not justify this penalty.

ATTENDANCE: Regular and punctual attendance in class work is expected of all students. Weekly reports of all absences from classes are to be made by each instructor and filed in the Dean's office. No instructor has the authority to excuse a student from class attendance, and it is his duty to report all absences and tardies to the Dean's office.

The first three tardies in a given course are counted as one absence, and each succeeding tardy is counted as an additional absence. One unexcused absence per semester hour without penalty is allowed for personal obligations. Sophomores, juniors, and seniors who in a normal schedule make averages of B or above in the preceding semester will be allowed two absences per semester hour for personal obligations, but will in all other respects be subject to the same regulations as other students. Absences due to illness when certified by a proper medical official will be excused. Absences due to authorized representation of the University may be excused. Officials in charge of groups representing the University are required to submit the names of those per-

sons to be excused to the appropriate dean's office forty-eight hours in advance of the hour when their absences are to commence. Absences due to individual and personal reasons will not be excused.

All absences immediately before and after announced holidays are counted as double absences. Such double absences commence at the hour the student leaves the campus before the holiday and are counted as double until the student arrives at his first class after the holiday. Absences at the beginning of each semester are also counted as double. Unexcused, consecutive absences, whether excessive or not, result in the loss of quality points the same as unexcused, excessive absences. Each unexcused, excessive or consecutive absence results in the loss of quality points: one quality point for the first absence, two additional for the second, and three additional for the third. When the third unexcused, excessive or consecutive absence occurs, the student is debarred from the course with a loss of six quality points and an "F" in the course. When the student has taken twelve absences, excused and unexcused, in any course he is required to drop the course unless the instructor and the dean concerned grant special permission for him to continue in the course. When a student's course load has been reduced to less than twelve semester hours due to excessive absences, he is required to withdraw from the University.

REPORTS: Reports on class attendance and proficiency in academic work are sent to parents or guardians after the examinations at the end of each semester. In addition, reports on freshmen are mailed at each mid-semester period.

DISMISSAL: A student of the freshman class to remain in the University must pass at least 6 semester hours of work in his first semester and 18 semester hours in his first year. All other students must pass at least 9 semester hours each semester. A student who is ineligible to re-enter in September is ineligible to enter the Summer Session. The University may require a student whose record is considered unsatisfactory to withdraw although he has met the minimum requirements set forth in this paragraph.

EXAMINATIONS: Final examinations are held in all subjects in January and May.

DEFICIENCIES IN COMPOSITION: Any student who must take English 1 and whose score on the English placement test indicates that he is not ready for English 1 must earn a passing grade in English 1 before being permitted to enter English 1.

Whenever the work of a student in any course is unsatisfactory because of errors in English, the instructor may report the student to the Dean, who will require him to enroll in remedial English until, in the opinion of the Remedial Laboratory, the deficiency is removed.

All instructors are requested to advise their students each semester concerning this regulation.

Activities



STUDENT BRANCHES OF ENGINEERING PROFESSIONAL SOCIETIES

The three Departments of the College of Engineering support student branches of the following national professional engineering societies:

American Institute of Electrical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers.

ENGINEERING STUDENT HONORARY SOCIETIES

The following honorary societies are represented at Duke:

Tau Beta Pi (Engineering national honor society—Gamma chapter of North Carolina).

Eta Kappa Nu (Electrical engineering national honorary society—Duke University Branch of Eta chapter).

Pi Tau Sigma (Mechanical engineering national honorary society—Pi Iota chapter).

Order of St. Patrick (Leadership in engineering student activities).

ENGINEERING STUDENT PUBLICATION

The DukEngineer, official student-published magazine of the College of Engineering which appears twice each semester, contains articles on technical and semi-technical topics and other matters of interest in the College.

ENGINEERS STUDENT COUNCIL

The Engineers Student Council, composed of approximately 20 members from the various organizations and classes in the engineering student body, coordinates the activities of all student organizations in the College of Engineering. The Council acts to represent the interests of the students in their relationships with the public, the faculty, and the administration. The Council is responsible for such activities as the Engineers' Show, Christmas decorations, homecoming displays, the student Lounge, and social events.

GENERAL ACTIVITIES OPEN TO ENGINEERS

The Young Men's Christian Association; Classical Club; Debate Council; Club Panamericano; Duke Masonic Club; Duke Players;

Duke Square Dance Club; Duke University Church (Interdenominational); Duke University Handbook and Directory; Freshman Advisory Council; Hoof 'n' Horn Club; Interfraternity Council; Intramural Athletic Department; Pegram Chemistry Club; Quadrangle Pictures; Shoe and Slipper Club; Student Religious Council; Town Boys' Club; G.O. Politan Club; World Student Service Fund; Young Democrats Club; Duke University Instrumental Music Association; Men's Glee Club; The University Chapel Choir; *The Archive* (Monthly); *Chanticleer* (Annual); *Chronicle* (Weekly); *Duke Peer*; The Student Broadcasting System.

HONORARY SOCIETIES

In addition to the national engineering student honorary societies, students of the College of Engineering are eligible for membership in the following national honorary societies:

Phi Beta Kappa (Scholarship); *Sigma Xi* (Scientific Research); *Omicron Delta Kappa* (Leadership—Men); *Phi Eta Sigma* (Freshman Scholarship); *Pi Mu Epsilon* (Mathematics); *Sigma Pi Sigma* (Physics); *Sigma Delta Pi* (Spanish); *Tau Kappa Alpha* (Forensic); *Tau Psi Omega* (French); *Theta Alpha Phi* (Dramatic); *Delta Phi Alpha* (German).

Local honorary societies for which engineers are eligible include: *Red Friars* (Leadership); *Beta Omega Sigma* (Sophomore Leadership).

NATIONAL SOCIAL FRATERNITIES

Alpha Tau Omega; Beta Theta Pi; Delta Sigma Phi; Delta Tau Delta; Kappa Alpha; Kappa Sigma; Lambda Chi Alpha; Phi Delta Theta; Phi Kappa Psi; Phi Kappa Sigma; Pi Kappa Alpha; Pi Kappa Phi; Sigma Alpha Epsilon; Sigma Chi; Sigma Nu; Sigma Phi Epsilon; Tau Epsilon Phi; Theta Chi; Zeta Beta Tau.

HONORS

To be eligible for Honors, a student must earn during the year a credit of not less than thirty semester hours. Students in the freshman, sophomore, and junior classes who earn an average of at least two and one-half quality points per semester hour are given Honors. All semester hours on which a student receives a grade are counted in the determination of Honors.

The degree of Bachelor of Science in Civil, Electrical, or Mechanical Engineering with distinction is conferred under the following rules:

Students who have completed a minimum of ninety semester hours in Duke University are eligible for general Honors at graduation. Those who earn an average of at least two and one-half quality points per semester hour are recom-

mended for a degree *magna cum laude*. Those who earn an average of at least two and three-fourths quality points per semester hour are recommended for a degree *summa cum laude*. All semester hours taken in Duke University on which a student receives a grade are counted in the determination of Honors.

THE JONES CHAIR OF ENGINEERING

Established in 1951 by Edwin L. Jones, Sr., '12, Annabel Lambeth Jones, '12; Edwin L. Jones, Jr., '48; Lucille Finch Jones; and the J. A. Jones Construction Company in memory of James Addison Jones and Raymond A. Jones; the income to be used for a professorship and/or for scholarship aid to worthy and qualified students in the College of Engineering.

PRIZES

The Sigma Xi Prize: The Society of the Sigma Xi, national scientific research society, is devoted to the encouragement of scientific research and seeks to stimulate those who show promise of accomplishment in this field. As an encouragement to younger men and women the Duke Chapter of Sigma Xi has established several prizes to be awarded annually, among them a prize for an outstanding undergraduate project or paper.

Julia Dale Prize in Mathematics: This is a prize of books given annually to the undergraduate who shows the greatest proficiency in the study of the calculus.

The Milmoor Prize: This prize, consisting of one year's subscription to the *Electrical World*, is awarded each year to that student from North or South Carolina graduating in the Department of Electrical Engineering, who, in the opinion of the faculty of that department and as shown by his grades, has made the most progress in electrical engineering during his last year in college.

The Tau Beta Pi Prize: The North Carolina Gamma Chapter of Tau Beta Pi, national honorary engineering society, awards each year a suitable prize, such as an engineering handbook, to a sophomore student in engineering for outstanding scholastic achievement during the freshman year.

The William Senhauser Prize is given by his mother in memory of her son, a member of the class of 1942, who lost his life in the Pacific Theatre of War on August 4, 1944. The award is made annually to the sophomore or junior in Trinity College or the College of Engineering who has made the greatest contribution through participation and leadership in intramural sports. The winner of this prize is chosen by a committee selected by the President of the University.

The Degree of Bachelor of Science in Engineering



THE studies in the College of Engineering are designed for students who are preparing for civil, electrical, or mechanical engineering as a profession. These studies lead to the following degrees: B.S. in C.E., B.S. in E.E., and B.S. in M.E. All curricula of the College are fully accredited by the Engineers' Council for Professional Development.

Uniform Requirements

Each of these degrees requires 148 semester hours of work, four of which are in physical education. A student must have at least a C average both for the entire program and in his senior year.

Besides the courses in their special fields, the three departments of the College—the Civil, the Electrical, and the Mechanical—require (1) a uniform program during the student's first year and (2) supplementary work in general courses throughout his last three years. The general courses are listed below. The special program of each department is given in the section of this Bulletin devoted to the specific department.

Air Force Reserve Officers' Training Corps and Naval Reserve Officers' Training Corps students who are majoring in engineering take the standard programs of their departments of specialization with certain exceptions that are noted under the respective departments.

General Courses of Instruction

REQUIRED NONENGINEERING SUBJECTS

CHEM. 1-2. GENERAL INORGANIC CHEMISTRY.—Lectures, recitations, and laboratory work on the elementary principles of chemistry and on the occurrence, preparation, properties, and uses of the elements and their compounds. One lecture, two recitations, and three laboratory hours, throughout the year. 8 s.h.

ECON. 51-52. PRINCIPLES OF ECONOMICS.—For sophomores. 6 s.h.

ENGL. L. ENGLISH FUNDAMENTALS.—Required of freshmen whose scores on the placement tests indicate that they are not ready for English 1. Students who fail in English L must repeat the course. Students who have earned credit in English L must also take English 1 and 2. 3 s.h.

ENGL. 1-2. ENGLISH COMPOSITION.—Required of all freshmen. 6 s.h.

ENGL. E-93. ADVANCED COMPOSITION FOR ENGINEERS.—This course concentrates on those forms of writing most needed by men in technical fields, especially engineers. Among other types of writing, it includes business letters, technical reports, and semi-technical articles. Open to non-engineering students only upon consent of the instructor. Prerequisite: English I and 2. 3 s.h. (w)

ENGL. I51. ESSENTIALS OF PUBLIC SPEAKING.—A basic course designed to give the poise necessary to speak freely before an audience. Particular attention on speech materials and oral presentation. 3 s.h.

HIST. E1-2. THE UNITED STATES IN THE WORLD TODAY.—Designed for students in the College of Engineering. First semester: the rise of national states in Western Europe and other circumstances attending the discovery and settlement of the New World; the foundation of American institutions; the establishment of the Federal Republic; the frontier, the westward movement, and contemporary international developments; the Civil War; the growth of industry and its influence on society; the Spanish-American War and the emergence of the United States as a world power. Second semester: the growing interdependence of the Western Nations in the twentieth century; their influence throughout the world; the participation of the United States in the World Wars, and the resulting problems of today. 6 s.h.

MATH. I. INTERMEDIATE ALGEBRA.—Elementary topics, factoring, fractions, linear equations in one, two, and three unknowns, functions and graphs, exponents and radicals, elements of quadratic equations. Prerequisite: one unit in algebra and one in geometry. Required before Math. 5 when necessary. 3 s.h.

MATH. 5. COLLEGE ALGEBRA.—Advanced topics in quadratic equations, systems involving quadratics, variation, binomial theorem, progressions, inequalities, theory of equations, permutations and combinations, probability, determinants, partial fractions. This course and Mathematics 6 may be taken concurrently. 3 s.h.

MATH. 6. PLANE TRIGONOMETRY.—Logarithms, right and oblique triangles, radian measure, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities and equations, complex numbers. This course and Mathematics 5 may be taken concurrently. 3 s.h.

MATH. 50. PLANE ANALYTIC GEOMETRY.—Rectangular and polar coordinates, loci, straight lines, conic sections. This course and Mathematics 51 may be taken concurrently. Prerequisites: Mathematics 5 and 6. 3 s.h.

MATH. 51. CALCULUS I.—Differentiation of elementary functions, curve tracing, maxima and minima, motion. Must be preceded or accompanied by Mathematics 50. 3 s.h.

MATH. 52. CALCULUS II.—Integration of elementary functions, areas, solid of revolution, length of arc, surfaces of revolution, centroids, moments of inertia, pressure, curvature, indeterminate forms. Prerequisite: Mathematics 51. 3 s.h.

MATH. 53. CALCULUS III.—Introduction to solid analytic geometry, partial differentiation, multiple integrals, series, introduction to differential equations. Prerequisite: Mathematics 52. 3 s.h.

MATH. 131. ELEMENTARY DIFFERENTIAL EQUATIONS.—Solution of elementary types; formation and integration of equations arising in applications. Prerequisite: Mathematics 52. 3 s.h.

PHYS. 51-52. GENERAL PHYSICS.—Treats the basic principles of general physics in a more quantitative manner than Physics 1-2. Not open for credit to students who have taken Physics 1-2. Four lecture-recitations and one three-hour laboratory period each week. Prerequisite: Mathematics 5-6 or equivalent (Mathematics 5 may be taken concurrently). 10 s.h.

AIR SCIENCE COURSES

The following courses are required of students in the Air Force Reserve Officers' Training Corps, as outlined in the various curricula:

BASIC COURSES

AS 1-2. FIRST YEAR BASIC AIR SCIENCE.—This course introduces the student to the AFROTC Program and the Field of Aviation. The fundamentals of global geography are studied in relationship to international tensions and the resulting formation of security organizations. The course concludes with an analysis of the instruments of National Military Security. 4 s.h. (w) STAFF

AS 51-52. SECOND YEAR BASIC AIR SCIENCE.—Stress is laid upon the elements of aerial warfare including targets, weapons, aircraft, air oceans, air bases, and Air Force organizations. A survey is made of the careers open to personnel in the Air Force. 4 s.h. (w) STAFF

ADVANCED COURSES

All students selected to continue in Air Science pursue:

AS 101-102. FIRST YEAR ADVANCED AIR SCIENCE.—The first semester is concerned with the Air Force commander and his staff; techniques of problem solving; communications processes and Air Force correspondence; instructing in the Air Force; military law, courts and boards. The second half of the course deals with Applied Air Science including aircraft engineering, navigation and weather. Attention is also given to the functions of an Air Force base. Prerequisites: AS 1-2 and 51-52 or equivalent. 8 s.h. (w) STAFF

AS 201-202. SECOND YEAR ADVANCED AIR SCIENCE.—The first semester includes a critique of summer camp training; seminar studies in the principles of leadership and management; and the relationship of military aviation to the art of war. The second semester is concerned with the military aspects of world political geography and with career guidance. Prerequisites: AS 1-2 and 51-52 or equivalent, and AS 101-102. 8 s.h. (w) STAFF

NAVAL SCIENCE COURSES

The following courses are required of students in the Naval Reserve Officers' Training Corps, as outlined in the various curricula:

(Standardized titles and designators for courses are established by the Bureau of Naval Personnel for use at the 52 NROTC Institutions. The first digit indicates the year of the course; the second digit indicates whether semester or quarter (0 for semester, 1 for quarter); the third digit indicates the semester or quarter of school year in which offered. Specialized courses for Marine Corps officer candidates are indicated by the letter "M" after the designator, and substitute for the basic course of the same number.)

NS-101. NAVAL ORIENTATION.—Organization for national security; the naval establishment and the operating forces; naval customs, traditions, regulations; basic characteristics, capabilities, and limitations of naval vessel types; nomenclature; introduction to carrier air, surface, undersea, and amphibious warfare; basic leadership. 3 s.h.

NS-102. NAVAL ORIENTATION.—American sea power since 1775; the elements of sea power; applications of sea power in the two World Wars; deck seamanship, rules of the nautical road, naval formations and maneuvers. 3 s.h.

NS-201. NAVAL WEAPONS.—Evolution of naval ordnance; types and properties of explosives; principles in design and assembly of guns, ammunition, fuses; automatic weapons; basic designs in torpedoes, mines, anti-submarine devices, rockets; principles in the control of fire of naval weapons against air, surface, and underwater targets; nuclear explosives. 3 s.h.

NS-202. NAVAL WEAPONS.—The elements in the problem of control of naval gun fire, the principles of mechanical and electronic solution of the problems; basic principles, capabilities and limitations of radar, sonar, and guided missiles; shore bombardment. 3 s.h.

NS-301. NAVIGATION.—Magnetic and gyro compass; principles of chart construction; the sailings and dead reckoning; piloting; electronic and radar navigation; relative motion; rules of the nautical road; basic aerology and meteorology; maneuvering in storm areas. 3 s.h.

NS-302. NAVIGATION.—Nautical astronomy including actual and apparent motion of earth, celestial coordinates, time systems, solutions of astronomical triangle, and observations for lines of position; use of the sextant; identification of stars and planets; complete day's work in practical navigation. 3 s.h.

NS-302M. HISTORY OF THE ART OF WAR.—The development of tactics and material as shown by decisive battles of history; historical causes and effects of wars; the development of United States military policy; total war; briefs of campaigns of World War II. 3 s.h.

NS-401M. UNITED STATES MILITARY HISTORY AND POLICY.—The development of U. S. military policy, the tactics of U. S. forces in selected battles, current policy and functions of the armed services. 3 s.h.

NS-402. SHIP STABILITY, NAVAL JUSTICE, AND LEADERSHIP.—The principles of ship stability and buoyancy in the practice of ship design, and in the practice of damage control. The procedures for, and the responsibility of, an officer in the administration of naval justice. The psychology and techniques of leadership. 3 s.h. (w)

NS-402M. AMPHIBIOUS WARFARE.—History of amphibious warfare and its development, principles of amphibious techniques, and applications of these principles in selected examples. 3 s.h.

General Engineering Subjects

1. ENGINEERING DRAWING.—The study of mechanical drawing with emphasis on third angle projection, pictorial drawing, dimensioning, working drawings, pencil and ink techniques. 2 s.h. ASSISTANT PROFESSORS HAINES AND LEWIS

2. DESCRIPTIVE GEOMETRY.—A study of drawing board geometry with emphasis on line and plane problems, developments, and intersections. Further emphasis on drawing techniques. Prerequisite: GE 1. 2 s.h. ASSISTANT PROFESSORS HAINES AND LEWIS

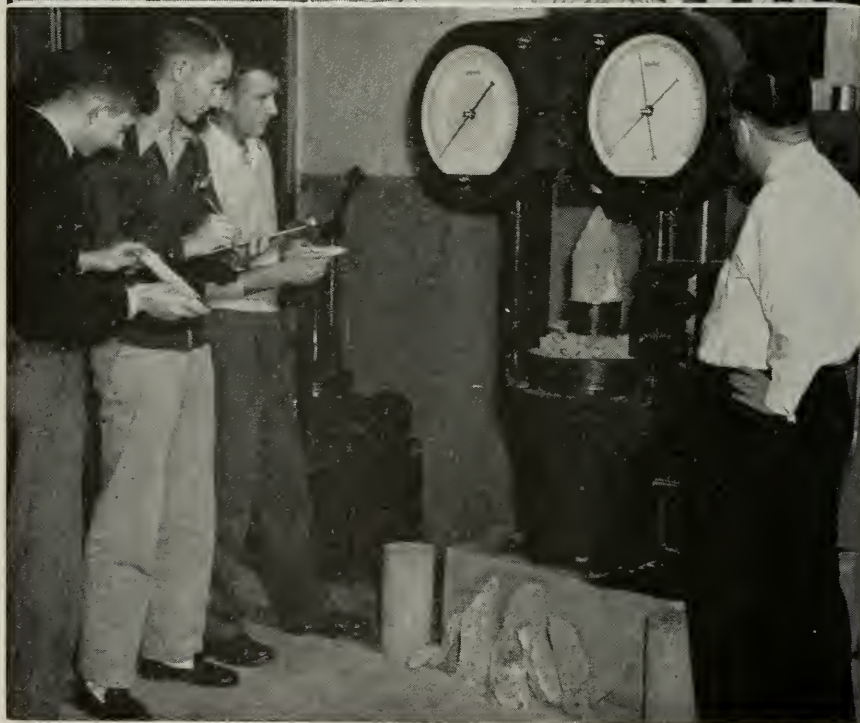
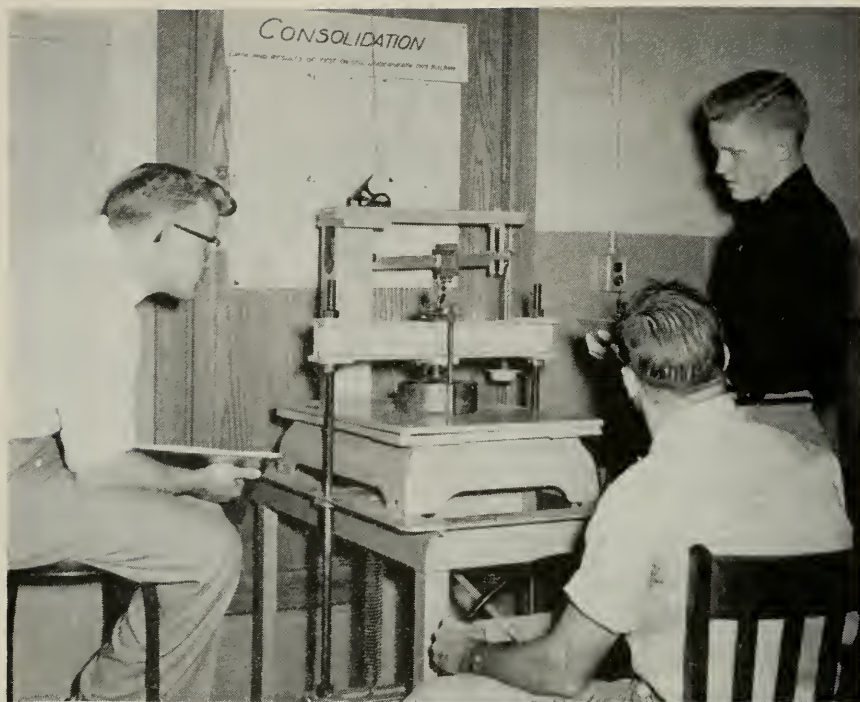
57. STATICS.—Concurrent forces, parallel forces, nonconcurrent and nonparallel forces, centroids, friction, moment of inertia. Prerequisite: GE 1. Mathematics 52 concurrent. 3 s.h. STAFF

58. DYNAMICS.—Translation, rotation, work, energy, and momentum. Prerequisites: GE 57 and Mathematics 52. 3 s.h. ASSISTANT PROFESSOR GARDNER

107. STRENGTH OF MATERIALS.—Elastic bodies under stress; flexure of simple, overhanging, fixed, and continuous beams; columns; combined stresses, etc. For C.E. students, the laboratory work is included in course C.E. 118. Other students should take course GE 109 for laboratory. Prerequisites: GE 57, Mathematics 52. 3 s.h. ASSOCIATE PROFESSOR PALMER AND STAFF

109. STRENGTH OF MATERIALS LABORATORY.—Study and use of testing machines and strain gages. Tests to determine significant physical properties of the common engineering materials. Experimental verification of the elementary theory of structural members. Must be preceded or accompanied by GE 107. 1 s.h. MR. ARGES

128. HYDRAULICS.—Elementary principles of hydromechanics. Application to engineering problems of hydrostatics and of the principles of energy, continuity, and momentum relating to flow. The effects of gravity and viscosity on fluid motion. Dimensional analysis and dynamic similarity; hydraulic measuring devices; steady flow in closed conduits and in open channels. Prerequisite: GE 58 or ME 52. 3 s.h. ASSOCIATE PROFESSOR WILLIAMS



Department of Civil Engineering



JAMES WESLEY WILLIAMS, Acting Chairman
Associate Professor

WILLIAM HOLLAND HALL
J. A. Jones Professor

AUBREY E. PALMER
Associate Professor

WILLIAM H. GARDNER, JR.
Assistant Professor

HOWARD N. HAINES
Assistant Professor

RALPH E. LEWIS
Assistant Professor

K. PETE ARGES
Instructor

CHANDLER WILCOX BROWN
Instructor

ROBERT F. PIERRY
Instructor

PAUL C. STOTTLEMYER
Instructor

KENNETH J. THARP
Instructor

W. GILLIES BROWN
Lecturer in Sanitary Engineering

THE work of a civil engineer may be divided into four major fields: sanitation—dealing with water works, sewerage systems, and garbage disposal; hydraulics—dealing with flood control, river improvements, irrigation, drainage, and water power; transportation—dealing with railroads, highways, airports, waterways, park systems, traffic control, and city planning; structures—dealing with bridges, buildings, foundations, dams, tunnels, tanks, bins, and various industrial structures. The concern of a civil engineer is primarily with design and construction, although often his responsibility includes maintenance. His undergraduate education comprises scientific, technical, civic, and cultural subjects. In order that he may become qualified to assume responsible charge of engineering work, he must supplement this instruction with progressive study after he graduates and while he is securing his practical experience.

The various facilities of the department are described below.

HIGHWAY MATERIALS

Complete equipment is available for the preparation and routine testing of aggregates, cement, and bituminous materials. There is also a Hubbard stability machine for additional tests.

SANITARY ENGINEERING

In the sanitary laboratory there is complete equipment for performing the physical, chemical, bacteriological, and microscopic tests as outlined by the American Public Health Association. Different types of water current meters are available for work in stream gauging.

SURVEYING

The department has an unusually modern and representative collection of transits, levels, plane tables, accessory equipment, as well as a precise level and theodolite.

CIVIL ENGINEERING DRAFTING ROOM

A special drawing room has been set aside for upperclassmen in civil engineering. The room is specially illuminated with fluorescent lights and has properly conditioned two-toned walls to relieve eye strain. Filing cabinets for storing each student's equipment, eight large-sized universal drafting machines, numerous smaller-sized ones, planimeters, curves, and other accessories are readily available.

STRESS LABORATORIES

For advanced instruction in stress analysis there are various polariscopes with facilities for taking and developing pictures, large-sized Begg's deformer, loading frames, and miscellaneous tools for preparing accurate models for testing. Electric calculating machines are to be found in an adjoining room so that the students may more readily compare calculated and experimental results.

CEMENT AND CONCRETE TESTING

For the testing of cement, fine and coarse aggregates, and concrete, two rooms and an adjoining closet are provided, the closet being equipped with temperature and moisture control. In addition to the small accessories there is an automatic shot-testing briquette machine, flow table, Ro-tap shaker, steam baths, unit weight measures, capping devices, special equipment for making the flexural test, as well as a new 300,000-pound hydraulic compression machine.

SOIL TESTING

For the classification of soils there is standard equipment for finding the liquid limit, plastic limit, shrinkage limit, field moisture equivalent, centrifuge moisture equivalent, specific gravity, sieve analysis using Ro-tap shaker, and hydrometer analysis using a constant temperature bath. In making foundation studies, permeability is measured by constant and variable head permeameters and by horizontal capillarity; shearing values are determined by unconfined compression tests, four modern shear machines as well as by two triaxial shear machines; bearings values are found by the Proctor and California bearing tests; consolidation and settlement forecasts are made from data secured on three consolidation machines. New laboratory tables will accommodate twenty students. Drying racks, electric ovens, and other accessories of the latest types are to be found in this laboratory.

MATERIALS LABORATORY

This laboratory is equipped to give instruction in the basic principles of stress and strain and for the testing of structural members. Its facilities are adequate for both graduate and undergraduate instruction. Included in this laboratory are three universal testing machines with capacities from 5,000 to 150,000 pounds; various hardness testers; machines for torsion, fatigue, and impact; calibration apparatus; and a variety of modern strain gauges of direct acting mechanical and electric-resistance types.

*Program of Studies for the Degree of Bachelor
of Science in Civil Engineering*

Freshman Year

FIRST SEMESTER

SECOND SEMESTER

		S.H.			S.H.
Math 5	College Algebra	3	Math 50	Analytic Geometry	3
Math 6	Trigonometry	3	Math 51	Calculus I	3
Chem 1	Chemistry	4	Chem 2	Chemistry	4
Engl 1	English Composition	3	Engl 2	English Composition	3
Hist E1	History	3	Hist E2	History	3
GE 1	Drawing	2	GE 2	Descriptive Geometry	2
	Physical Education	1		Physical Education	1
		<hr/> 19			<hr/> 19

Air Force ROTC students: AS 1 (2 s.h.) is substituted for Hist E1 and AS 2 (2 s.h.) is substituted for Hist E2 above.

Naval ROTC students: NS 101 (3 s.h.) is substituted for Hist E1 and NS 102 (3 s.h.) is substituted for Hist E2 above.

Sophomore Year

FIRST SEMESTER

SECOND SEMESTER

		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	GE 107	Strength of Materials	3
CE 61	Surveying	4	CE 62	Surveying	4
	Physical Education	1		Physical Education	1
		<hr/> 19			<hr/> 19

Air Force ROTC students: AS 51-52 (4 s.h.) are substituted for Econ 51-52 above.

Naval ROTC students: NS 201 (3 s.h.) and NS 202 (3 s.h.) are substituted for Econ 51-52 above.

Junior Year

FIRST SEMESTER			S.H.	SECOND SEMESTER			S.H.
Engl	E93	Advanced Composition	3	Engl	151	Public Speaking	3
GE	58	Dynamics	3	GE	128	Hydraulics	3
CE	131	Structures	5	CE	132	Structures	5
CE	113	Route Surveying	3	CE	118	Materials	3
EE	123	Electric Circuits	4	EE	124	Electric Machinery	4
			18				18

Air Force ROTC students: AS 101-102 (8 s.h.) are substituted for Engl E93 and Engl 151 above.

Naval ROTC students: NS 301 (3 s.h.) and NS 302 (3 s.h.) are substituted for Engl E93 and Engl 151 above.

Senior Year

FIRST SEMESTER			S.H.	SECOND SEMESTER			S.H.
CE	123	Water Supply	4	CE	124	Water Purification	3
CE	135	Soils	3	CE	116	Highways	3
CE	133	Reinforced Concrete	4	CE	140	Indeterminate Structures	3
ME	103	Heat Power	3	ME	104	Heat Power	3
ME	115	Mech. Eng. Laboratory	1	ME	116	Mech. Eng. Laboratory	1
†Approved Free Elective			3	†Approved Free Electives			5
			18				18

Air Force ROTC students: AS 201-202 (8 s.h.) are substituted for free electives.

Naval ROTC students (candidates for a Navy commission): NS 402 (3 s.h.) is substituted for a free elective.

Naval ROTC students (candidates for a Marine Corps commission): NS 401M (3 s.h.) and NS 402M (3 s.h.) are substituted for free electives.

Courses of Instruction

61. PLANE SURVEYING.—Use of instruments; transit, stadia and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisites: GE 1 and Math 6. 4 s.h.

MR. C. W. BROWN AND STAFF

62. ADVANCED SURVEYING.—Simple triangulation; topographic surveying using stadia and plane table; laying out and division of land; public land system; calculations; grading plans and quantities; determination of azimuth by H.O. 211. Prerequisite: CE 61. 4 s.h.

MR. C. W. BROWN AND STAFF

108. *ADVANCED STRENGTH OF MATERIALS.—Applications of Mohr's circle, deflections, and energy of strain to advanced problems. Prerequisite: GE 107. 3 s.h.

ASSOCIATE PROFESSOR WILLIAMS

S110. PLANE SURVEYING.—The equivalent of CE 61 given especially for students in forestry. See *Bulletin of Summer Session*. 4 s.h.

MR. THARP

113. ROUTE SURVEYING.—Thorough drill in the calculation and laying out of simple, compound, and easement curves; widening of curves; vertical curves; setting slope stakes; ordinary earthwork computations and mass diagrams. Prerequisite: CE 61. 3 s.h.

ASSOCIATE PROFESSOR WILLIAMS

† It is recommended that 6 of the required 8 semester hours of free electives in the senior year be taken in liberal arts.

* Offered only upon sufficient demand; enrollment limited.

116. HIGHWAY ENGINEERING.—Location, design, construction and maintenance of highways and city streets; soil stabilization; traffic studies; economics of planning and design. Prerequisites: CE 113, CE 135. 3 s.h.

ASSOCIATE PROFESSOR WILLIAMS

118. MATERIALS OF ENGINEERING.—Study and testing of materials commonly used in civil engineering. The content of course GE 109 and standard tests to determine significant physical properties of cementing materials and aggregates. The design and proportioning of concrete mixtures. Prerequisite: GE 107. 3 s.h.

ASSOCIATE PROFESSOR WILLIAMS

121. *HYDROLOGY.—Fundamentals of meteorology; precipitation; evaporation. Ground water development. Stream flow and stream gaging. Hydrograph analysis. Flood control. Field trips to be arranged. Prerequisite: GE 128. 3 s.h.

MR. STOTTLEMYER

123. WATER SUPPLY AND SEWERAGE.—Statistical analysis of rainfall and run-off records; population estimation; analysis of the yield of watersheds and storage requirement; design of water distribution systems; design of sanitary and storm sewerage systems. Prerequisite: GE 128. 4 s.h.

MR. STOTTLEMYER

124. WATER PURIFICATION AND SEWAGE TREATMENT.—Chemical and bacteriological analysis of water and sewage effluents; design of water purification treatment systems; design of sewage treatment plants. Prerequisite: CE 123. 3 s.h.

MR. W. G. BROWN

128. *INDUSTRIAL WATER SUPPLIES.—Water quality for industrial uses. Analytical techniques and interpretation of results. Boiler feed water requirements; softening; ion exchange; deaeration, priming; foaming; corrosion; embrittlement. Control of treatment processes. Prerequisite: Chemistry 1-2. 3 s.h.

MR. STOTTLEMYER

129-130. *ELEMENTARY STRUCTURES.—Stresses in beams and trusses for fixed and moving loads. Deflection of beams and trusses. Design of tension, compression, and flexural members; connections; and plate girders. Design of reinforced concrete beams, slabs, columns, footings, and retaining walls. (For students not majoring in Structural Engineering.) Prerequisite: GE 107. 6 s.h.

ASSOCIATE PROFESSOR PALMER

131. STRUCTURES.—ANALYSIS AND ELEMENTARY DESIGN.—Stresses in roofs, parallel and inclined chord bridges, including sub-divided panels, by algebraic and graphic methods under all conditions of loading; shear and moments in frames and bents; influence lines; Williot diagram. Structural drafting; details in steel and timber; methods of fabrication and erection. Prerequisite: GE 107. 5 s.h.

ASSOCIATE PROFESSOR PALMER

132. STRUCTURES.—DESIGN.—Tension, compression, flexural members, end posts, eccentric connections, unsymmetrical bending; riveted and welded plate girders; trusses and office building frames; wind analysis. Design and detail drawings. Prerequisite: CE 131. 5 s.h.

ASSOCIATE PROFESSOR PALMER

133. REINFORCED CONCRETE.—Theory and design of reinforced concrete beams, slabs, and columns including eccentric loads; footings; retaining walls. Prerequisite: GE 107. 4 s.h.

ASSOCIATE PROFESSOR PALMER

135. SOIL MECHANICS.—Identification and classification; flow nets; frost action; stability of foundations, cuts and embankments, and retaining walls; settlement. Laboratory includes identification, permeability, shear, unconfined compression, consolidation and compaction tests. Prerequisite GE 107. 3 s.h.

ASSISTANT PROFESSOR GARDNER

137-138. *SEMINAR.—Students are required to make reports and to talk on current engineering literature or on such other topics as may be assigned. 2 s.h.

ASSOCIATE PROFESSOR WILLIAMS AND STAFF

* Offered only upon sufficient demand; enrollment limited.

140. INDETERMINATE STRUCTURES.—Application of least work, slope deflection, moment distribution, and column analogy. Analytic, graphic, and experimental methods are used. Prerequisites: CE 131, CE 133. 3 s.h.

ASSOCIATE PROFESSOR PALMER

142. *HYDRAULIC ENGINEERING.—Statical and dynamical principles of fluids applied to specific engineering problems. Effects of gravity, viscosity, compressibility, and surface tension on fluid motion in closed conduits and open channels; surface and form resistance; dimensional analysis and theory of models. Non-uniform flow in open channels. Hydraulic jump, backwater curves. Hydraulic problems of flood control, flood routing. Dam design. Prerequisite: GE 128 or ME 105. 3 s.h.

ASSOCIATE PROFESSOR WILLIAMS

143-144. PROJECTS IN CIVIL ENGINEERING.—This course may be assigned by the Chairman of the Department to certain seniors who have shown an aptitude for research in one distinct field of civil engineering, in which case it may be substituted for certain general civil engineering courses. 2-6 s.h.

STAFF

146. CIVIL ENGINEERING PROBLEMS.—Professional aspects of civil engineering practice. Selected problems in analysis and design, considerations of engineering economy, contracts, specifications, and ethics. Seniors only. 2-3 s.h.

ASSOCIATE PROFESSOR PALMER

* Offered only upon sufficient demand; enrollment limited.

Department of Electrical Engineering



WALTER JAMES SEELEY, Chairman
James B. Duke Professor
CHARLES ROWE VAIL, Executive Officer
Associate Professor

OTTO MEIER, JR.
Associate Professor

FRANK NICHOLAS EGERTON
Assistant Professor

EDWARD KREADY KRAYBILL
Assistant Professor

HARRY ASHTON OWEN, JR.
Assistant Professor

GILMORE BOWERS
Instructor

ROBERT LEON THURSTONE
Instructor

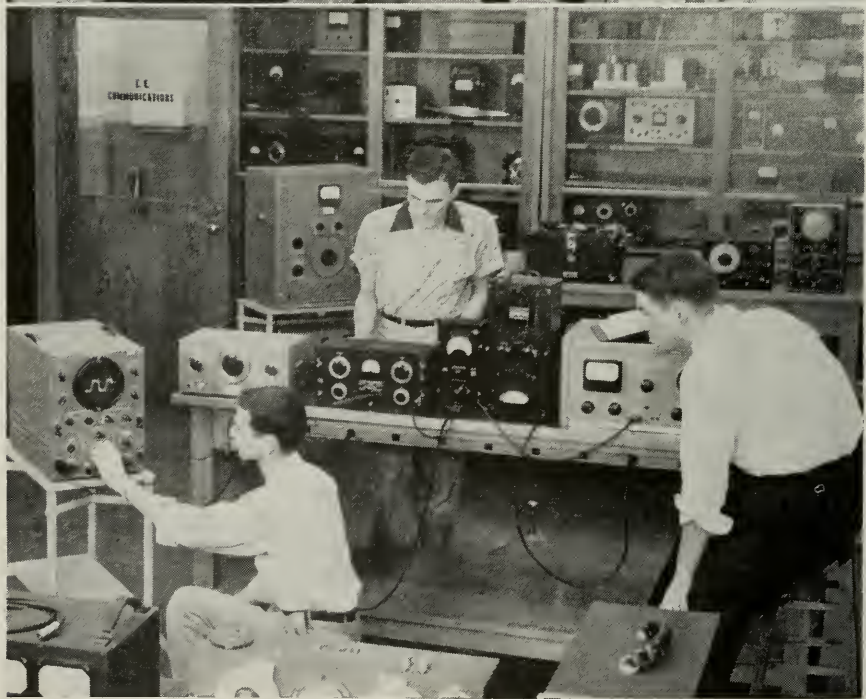
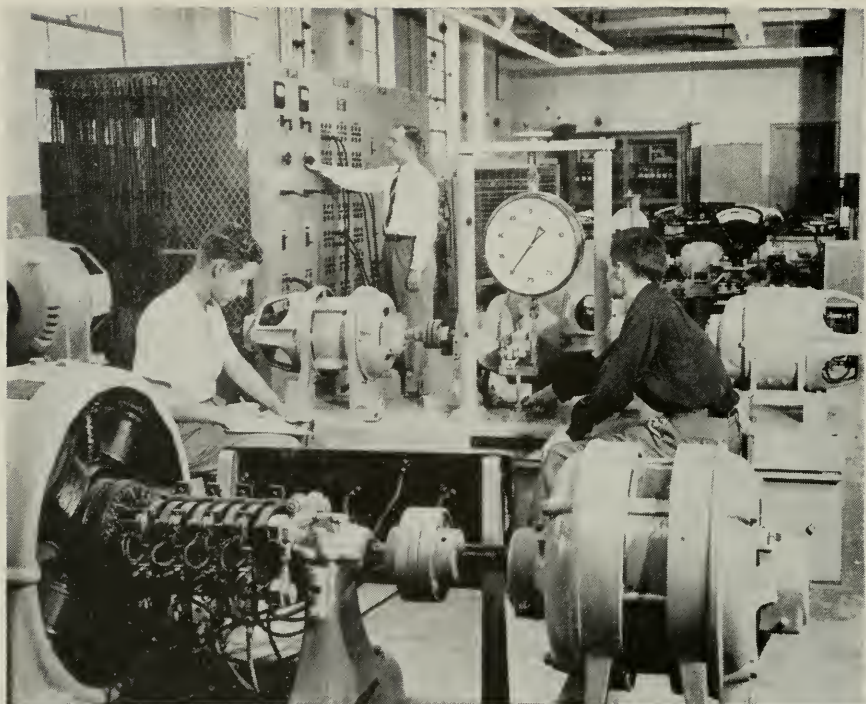
THE profession of electrical engineering enters into every form of industry and public service where power is utilized, intelligence is transmitted, and precise control is exercised over physical, chemical, or mechanical operations. Within its province come the generation, transmission, distribution, and utilization of electric power; communications, embracing acoustics, telegraphy, telephony, radio, television, and radar; illumination; electrical transportation; and industrial processes and their control. In any one of these and other varied fields of application, the electrical engineer may engage in work which ranges from basic research, through development, design, manufacturing, sales, operation, and maintenance, to administration, consulting and teaching.

To prepare students to meet these broad professional demands, the curriculum in electrical engineering has been carefully designed to provide a solid foundation of mathematics and basic science, a comprehensive training in general engineering fundamentals, an integrated study of the principles of electrical engineering, and an appropriate rounding in the liberal arts.

Classroom theory is translated into practice in the excellently equipped laboratories which are described in the following paragraphs.

THE FIELDS AND CIRCUITS LABORATORY

This laboratory is equipped for the experimental study of electric and magnetic fields and circuits. Electric and fluid analogue mappers are used in plotting the configurations of two-dimensional electric and magnetic fields. Studies are made of electric circuit parameters considered both singly and in combination, and magnetic circuit principles are tested. Nonsinusoidal waves are both synthesized and ana-



lyzed, and oscillographic studies are made of both the steady-state and transient behavior of direct-current circuits and single-phase and poly-phase alternating-current circuits.

THE ELECTRICAL MEASUREMENTS LABORATORY

Facilities are provided in this laboratory for studying the design and operation of electric instruments and the principles and techniques of measuring and recording electrical quantities throughout the entire frequency spectrum, ranging from direct current through power, audio, and radio frequencies.

THE STANDARDIZING LABORATORY

This laboratory is provided with high-precision instruments that are used as standards against which to check and calibrate instruments used in the other laboratories. Standards of potential difference, current, power, energy, time, and frequency are included.

THE ELECTRONICS LABORATORY

The equipment of this laboratory is used in studying the physical behavior of high-vacuum and gas-filled electronic tubes and their associated circuits. Applications are made to power-supply units, vacuum-tube voltmeters, oscillators, amplifiers, sweep-circuit generators, and cathode-ray oscillographs.

THE COMMUNICATIONS LABORATORY

Equipment for making measurements and performing experiments in the audio- and radio-frequency ranges is provided in this laboratory. Typical of the experiments performed by students in this laboratory are: harmonic generation and wave analysis, study of circuit elements at audio and radio frequencies, square-wave testing, investigation of transmission characteristics of an artificial telephone line, impedance matching at audio and radio frequencies, study of modulation and detection systems, generation and amplification of audio- and radio-frequency signals, frequency and field intensity measurements, and determination of antenna radiation patterns.

THE ULTRA-HIGH FREQUENCY LABORATORY

This laboratory is equipped to study the performance of circuits and systems in the frequency range from 100 to 5000 megacycles. Resonant lines, stub-matching sections, wave guides, resonant cavities, klystrons, magnetrons, horn radiators, and parabolic reflectors are typical of the devices studied.

THE ANECHOIC LABORATORY

As the name implies, this laboratory is housed in a non-echoing soundproof room in which experiments and measurements can be performed on microphones, loudspeakers, and associated electro-acous-

tical devices. Sound level meters are used for the measurement of the reverberation characteristics of rooms and of the sound-absorbing qualities of various materials. A broadcast-type tape recorder is used for recording and playing special testing signals as well as for more common uses.

THE ELECTRIC MACHINERY LABORATORY

The electric machinery laboratory contains a wide variety of electric power equipment especially selected and arranged for effective instruction and for carrying out special student projects. The work in this laboratory includes standard tests of conventional machine characteristics as well as advanced studies of technical principles. Chief among the rotating machines especially developed for use in educational laboratories are both direct-current and alternating-current motor-generator sets with associated dynamometer equipment. A wide variety of transformers is employed in studying not only the characteristics of transformers but their use in both single-phase and poly-phase systems. All types of loads are applied in studying the characteristics of these machines and these systems.

THE INDUSTRIAL CONTROL LABORATORY

A variety of typical electromagnetic and electronic industrial control apparatus permits instruction and experimentation in this field.

THE HIGH VOLTAGE LABORATORY

This laboratory is used for instruction, testing, and research with 60-cycle voltages ranging up to 100,000 volts and impulse voltages up to 500,000 volts. A high speed cathode-ray oscillograph permits the study of phenomena occurring within a tenth of a microsecond.

THE ILLUMINATION LABORATORY

The facilities of this laboratory are used for conducting development tests on all types of light sources, for the examination of certain phases of current lighting practice, and for research in illumination.

PHOTOGRAPHIC FACILITIES

A department photographic dark room is maintained for use in processing photographic records obtained in the various laboratories. A variety of cameras, including a high-speed 16-mm motion picture camera, is available for research use.

AMATEUR RADIO STATION W4AHY

The facilities of this station, under the supervision of the Engineers' Radio Association, are used by interested students who hold licenses to gain practical experience in short wave radio and to communicate with other amateur radio operators the world over. The call letters

W4AHY have been assigned to the station by the Federal Communications Commission, which has granted a license to operate on the popular amateur bands using both code and voice transmission.

Program of Studies for the Degree of Bachelor of Science in Electrical Engineering

Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 5	College Algebra	3	Math 50	Analytic Geometry	3
Math 6	Trigonometry	3	Math 51	Calculus I	3
Chem 1	Chemistry	4	Chem 2	Chemistry	4
Engl 1	English Composition	3	Eng 2	English Composition	3
Hist E1	History	3	Hist E2	History	3
GE 1	Drawing	2	GE 2	Descriptive Geometry	2
	Physical Education	1		Physical Education	1
		19			19

Air Force ROTC students: AS 1 (2 s.h.) is substituted for Hist E1 and AS 2 (2 s.h.) is substituted for Hist E2 above.

Naval ROTC students: NS 101 (3 s.h.) is substituted for Hist E1 and NS 102 (3 s.h.) is substituted for Hist E2 above.

Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	ME 52	Kinetics—Mechanism	4
EE 51	Survey of Electrical Engineering	1	EE 52	Fields	3
Engl E93	Advanced Composition	3		Physical Education	1
	Physical Education	1			19
		19			

Air Force ROTC students: AS 51 (2 s.h.) and AS 52 (2 s.h.) are substituted for Econ 51-52 above.

Naval ROTC students: NS 201 (3 s.h.) and NS 202 (3 s.h.) are substituted for Econ 51-52 above.

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
EE 101	Circuits	3	EE 102	Circuits	3
EE 107	Circuits Laboratory	1	EE 108	Circuits Laboratory	1
EE 105	Measurements	4	EE 106	Electronics	4
Math 131	Differential Equations	3	EE 148	D-C Machinery	3
ME 103	Heat Power	3	ME 104	Heat Power	3
ME 115	Mech. Eng. Laboratory	1	ME 116	Mech. Eng. Laboratory	1
GE 128	Hydraulics	3	Engl 151	Public Speaking	3
		18			18

Air Force ROTC students: AS 101-102 (8 s.h.) are substituted for GE 128 and Engl 151 above.

Naval ROTC students: NS 301 (3 s.h.) and NS 302 (3 s.h.) are substituted for GE 128 and Engl 151 above.

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
	S.H.		S.H.
EE 257 A-C Machinery	3	EE 258 A-C Machinery	3
EE 163 Machinery Laboratory	1	EE 164 Machinery Laboratory	1
EE 261 Communications	4	EE 262 Communications	4
EE 165 Seminar	1	EE 166 Seminar	1
EE 159 Transmission	3	GE 107 Strength of Materials	3
*Approved Free Electives	6	GE 109 Materials Laboratory	1
	—	*Approved Free Electives	5
	18		18

Air Force ROTC students: AS 201-202 (8 s.h.) is substituted for free electives. GE 128 is to be taken as the remaining elective first semester, and English 151 is recommended as the remaining elective for the second semester.

Naval ROTC students (candidates for a Navy commission): NS 402 (3 s.h.). GE 128 (3 s.h.) and Engl 151 (3 s.h.) are substituted for free electives above.

Naval ROTC students (candidates for a Marine Corps commission): NS 401M (3 s.h.) and NS 402M (3 s.h.) are substituted for free electives.

Courses of Instruction

51. SURVEY OF ELECTRICAL ENGINEERING.—A course designed to give the student a general survey of the engineering profession, to define the scope of activities of the electrical engineer, and to provide an introduction to engineering problems. One two-hour computation. 1 s.h. ASSISTANT PROFESSOR KRAYBILL

52. ELECTRIC AND MAGNETIC FIELDS.—An introductory course covering a mathematical and physical analysis of energy relations in electrostatic and magneto-static fields; resistance, capacitance and inductance of systems of conductors; systems of electric and magnetic units. Two recitations and one two-hour computation. Prerequisites: EE 51, Mathematics 52. Physics 52, Mathematics 53 concurrently. 3 s.h. ASSOCIATE PROFESSOR VAIL

101-102. CIRCUITS IN ELECTRICAL ENGINEERING.—A two-semester course covering methods of electric and magnetic circuit analysis applicable in all branches of electrical engineering; alternating and direct currents; the algebra of vectors and complex quantities; networks; coupled circuits; polyphase circuits; nonsinusoidal waves; transients; complex frequency. Prerequisite: EE 52. EE 107-108 and Mathematics 131 concurrently. 6 s.h. ASSOCIATE PROFESSOR VAIL

105. ELECTRICAL MEASUREMENTS.—A course covering direct-current and low-frequency measurements; the theory, calibration, and use of laboratory standards and of apparatus for the measurement of potential, current, power and energy; and audio-frequency determination of impedance. Three class sessions and one three-hour laboratory. Prerequisite: EE 52. Mathematics 131 and EE 101 concurrently. 4 s.h. ASSISTANT PROFESSOR OWEN AND MR. THURSTONE

106. ELECTRON TUBES AND CIRCUITS.—A course covering electronic emission, static and dynamic tube characteristics, rectification, glow-discharge tubes, amplifiers, oscillators, and other typical circuits. Three class sessions and one three-hour laboratory. Prerequisites: EE 101, EE 105, EE 107. EE 102 and EE 108 concurrently. 4 s.h. ASSISTANT PROFESSOR OWEN AND MR. THURSTONE

107-108. CIRCUITS LABORATORY.—A two-semester course designed to provide instruction in electrical laboratory techniques and in the preparation of engineering reports, and to provide experimental verification of the theory of course EE 101-102, with which it should be taken concurrently. One three-hour laboratory. 2 s.h. ASSOCIATE PROFESSOR VAIL AND MR. BOWERS

* It is recommended that 6 of the required 11 semester hours of free electives in the senior year be taken in liberal arts.

123. PRINCIPLES OF ELECTRIC CIRCUITS.—A course designed especially for students in other branches of engineering, covering the fundamental electrical units and both alternating and direct-current circuits. Three class sessions and one three-hour laboratory. Prerequisites: Mathematics 52 and Physics 52. 4 s.h.

ASSISTANT PROFESSORS KRAYBILL AND EGERTON;
MESSRS. BOWERS AND THURSTONE

124. PRINCIPLES OF ELECTRIC MACHINERY.—A course designed especially for students in other branches of engineering, covering the application of the principles of course EE 123 to alternating and direct-current machinery and associated apparatus. Three class sessions and one three-hour laboratory. Prerequisite: EE 123. 4 s.h.

ASSISTANT PROFESSORS KRAYBILL AND EGERTON; MR. THURSTONE

148. DIRECT-CURRENT MACHINERY.—A study of the principles which underlie the design and operation of all types of direct-current generators, motors, and associated apparatus. Prerequisites: EE 101 and EE 107. EE 102 and EE 108 concurrently. 3 s.h.

ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

158. *ELECTRIC-POWER SYSTEMS.—A course providing a brief survey of the electric-power industry followed by a consideration of the economic and engineering features of power plant location and design, and by a study of the apparatus utilized in the generation, transmission and distribution of electric power. Prerequisites: EE 148 and ME 104, and permission of instructor. EE 257-258 concurrently. Elective for electrical majors. 3 s.h.

PROFESSOR SEELEY

159. TRANSMISSION.—A development of the theory underlying the transmission of electric energy over conductors at both power and communication frequencies. Two class sessions and one two-hour computation. Prerequisites: EE 101-102, EE 105, EE 106, Mathematics 131. 3 s.h.

PROFESSOR SEELEY

161. *HIGH-VOLTAGE PHENOMENA.—An introductory study of high-voltage phenomena and their engineering applications: behavior of gaps and insulators upon application of power-frequency and impulse voltages; corona; properties of insulating materials; high-voltage measurements; elements of high-voltage design. Two class sessions and one three-hour laboratory. Prerequisites: EE 101-102, EE 105, 106, and permission of instructor. Elective for electrical majors. 3 s.h.

ASSOCIATE PROFESSOR VAIL

163-164. ELECTRIC MACHINERY LABORATORY.—A study of the technique of testing electric machines and a thorough analysis of their performance. Concurrent with EE 257-258. One three-hour session, for two semesters. 2 s.h.

ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

165-166. ELECTRICAL ENGINEERING SEMINAR.—A course in which seniors are required to present oral reports and dissertations on material appearing in current engineering literature. Juniors may participate, but without credit. 2 s.h.

STAFF

171. *FUNDAMENTALS OF ILLUMINATION.—A course designed to familiarize the student with some of the factors that influence seeing; to provide a working knowledge of lighting language, sources, and measuring techniques; and to acquaint the student with the basic factors involved in recommended lighting practice. Two class sessions and one two-hour computation. Prerequisites: EE 101-102 or EE 123, and permission of instructor. Elective. 3 s.h.

ASSISTANT PROFESSOR KRAYBILL

173-174. *PROJECTS IN ELECTRICAL ENGINEERING.—A course which may be undertaken only by seniors who show special aptitude, or who may have had previous experience directly related to the proposed project. The consent of the Chairman of the Department must be obtained before registering. Elective for electrical majors. 3-6 s.h.

STAFF

* Offered only upon sufficient demand; enrollment limited.

180. *RADIO-FREQUENCY TRANSMISSION AND PROPAGATION.—Theory and application of transmission and propagation at high and ultra-high frequencies; impedance-matching elements; coupling devices; cavity resonators; wave guides and antennas. Two class sessions and one three-hour laboratory. Prerequisites: EE 159, EE 261, and permission of instructor. EE 262 concurrently. Elective for electrical majors. 3 s.h.
ASSISTANT PROFESSOR OWEN

197. *INDUSTRIAL APPLICATIONS OF ELECTRICAL EQUIPMENT.—A course of lectures, demonstrations and recitations designed especially for students in other branches of engineering, dealing with the basic principles of utilization of a wide variety of electrical equipment in industrial practice. Emphasis is on industrial control, motor and generator applications, and electronic devices and applications. Prerequisite: EE 124, and permission of instructor. Elective for non-electricals. 3 s.h.
ASSOCIATE PROFESSOR MEIER

198. *INDUSTRIAL CONTROL.—This course, open only to students majoring in electrical engineering, consists of a study of the electromagnetic and electronic control of electric motors in industrial applications. Prerequisites: EE 101-102, EE 106, EE 148, EE 257, and permission of instructor. EE 258 concurrently. Elective for electrical majors. 3 s.h.
ASSOCIATE PROFESSOR MEIER

257-258. ALTERNATING-CURRENT MACHINERY.—A two-semester course dealing with the theory underlying the design, construction, and operation of synchronous generators, transformers, polyphase induction motors, synchronous motors, single-phase motors of all types, and converters and rectifiers. Prerequisites: EE 101-102 and EE 148. 6 s.h.
ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

261. COMMUNICATION ENGINEERING.—An advanced course dealing with the principles underlying radio communication with special emphasis on the development of methods and procedures for the mathematical analysis of electron tube circuits. Included are vacuum tube amplifiers, oscillators, special electron tube circuits, and introduction to pole and zero studies of response and impedance. Three class sessions and one three-hour laboratory. Prerequisites: EE 101-102, EE 105, EE 106, and Mathematics 131. 4 s.h.
ASSISTANT PROFESSOR OWEN

262. COMMUNICATION ENGINEERING.—The second half of the course EE 261. Included are rectifiers and filters, amplitude and frequency modulation, demodulation, microwave tubes, propagation of radio waves, antennas. Three class sessions and one three-hour laboratory. Prerequisite: EE 261. 4 s.h.
ASSISTANT PROFESSOR OWEN

263-264. *OPERATIONAL CIRCUIT ANALYSIS.—An advanced course covering the mathematical analysis of certain circuits used in electrical engineering, with an introduction to the application of operational calculus to circuit analysis. Prerequisites: EE 101-102, Mathematics 131, and permission of instructor. Elective for electrical majors. 6 s.h.
PROFESSOR SEELEY

* Offered only upon sufficient demand; enrollment limited.

Department of Mechanical Engineering



VAN LESLIE KENYON, Acting Chairman
Associate Professor

RALPH SYDNEY WILBUR
Professor

LESLIE CLIFFORD WILBUR
Assistant Professor

FREDERICK JEROME REED
Associate Professor

IAN MACCONOCHIE
Instructor

CHARLES DARBY FULTON, JR.
Assistant Professor

WALTER GOLD SMITH
Instructor

ERNEST ELSEVIER
Assistant Professor

DAVID RABIN
Instructor

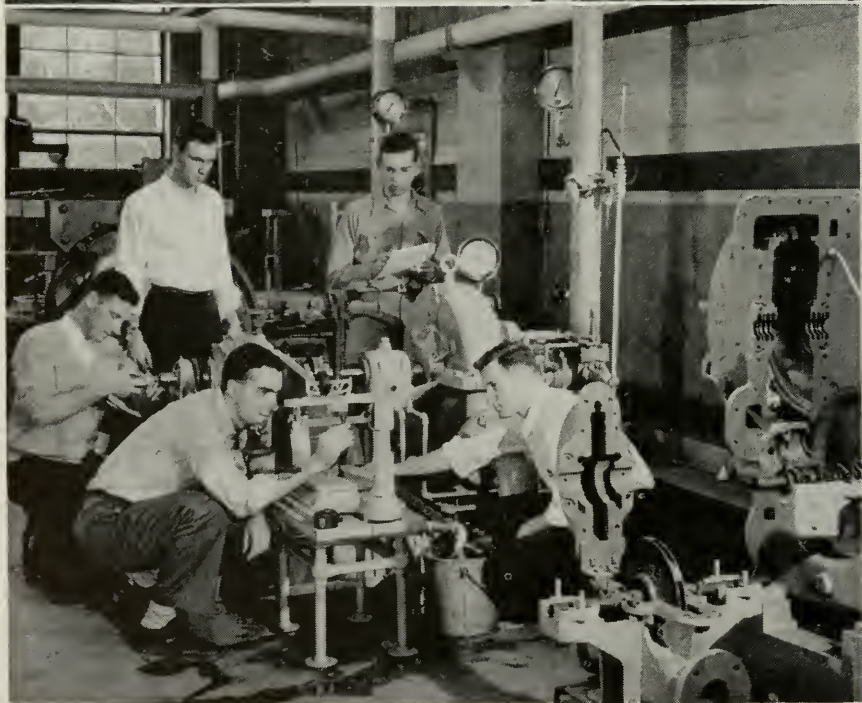
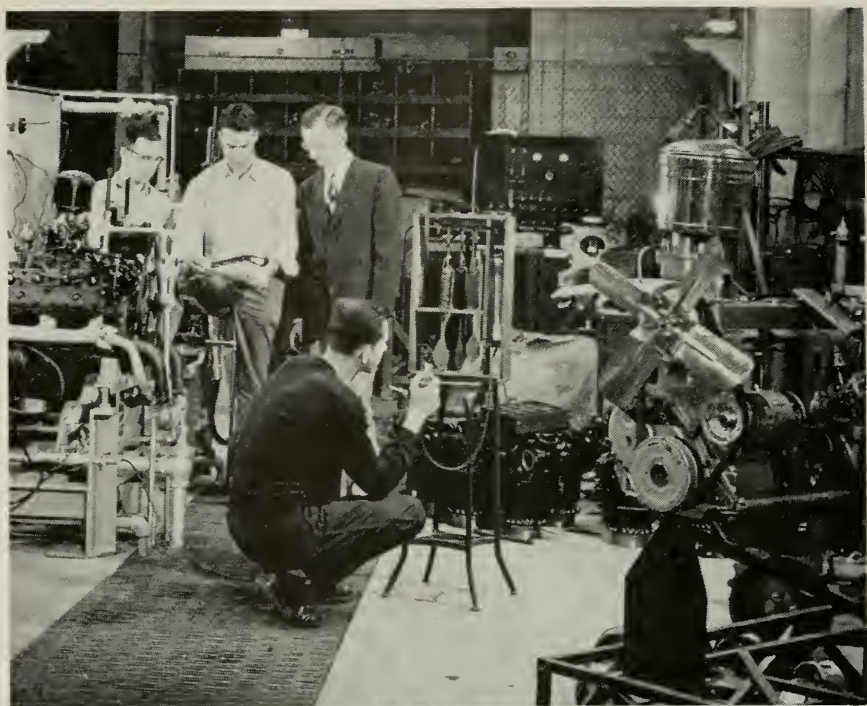
RAY WALTER HOLLAND
Assistant Professor

MECCHANICAL ENGINEERING is a profession devoted to the application of machines, heat, and power to the service of man. The technical work of the profession is based upon physics, chemistry, and mathematics, and especially upon mechanics and thermodynamics. Mechanical engineering includes such fields as heating, air conditioning, refrigeration, power production, machine design, and manufacturing, and is concerned with the creation and practical use of such equipment as automobiles, railways, engines, compressors, machine tools, and mechanisms. The activities of mechanical engineering graduates range from research and design to production, testing, application, management, sales, and maintenance.

The mechanical engineering course at Duke University is designed to give the student a foundation in the principles of the profession so that he will be prepared to apply himself readily to any of its special fields. Through the combination of his curricular and extra-curricular experiences, the student is given the fullest possible opportunity to develop his scientific knowledge, mental discipline, practical judgment, ingenuity, ethics, social balance, and leadership ability.

POWER PLANT LABORATORY

This laboratory occupies a two-story wing off the main mechanical engineering laboratory. An automatic oil-fired Combustion Engineering boiler, designed specifically for the needs of this laboratory, produces 3200 pounds of steam per hour at a pressure of 250 pounds and a temperature of 556°F. This steam is utilized to operate a complete



experimental power plant consisting of two 25-kw Westinghouse turbo-generator units, a condenser with air ejector and after-condenser, a feedwater heater, pumps and accessories, and a control and instrument panel. The electric energy is absorbed by resistors or by a synchronous motor coupled to a water brake. Interconnection of piping and controls, together with complete instrumentation, enable the simulation and study of many types of power plants.

MECHANICAL LABORATORY

STEAM EQUIPMENT: Adjacent to the boiler room are a horizontal Troy engine with shaft cut-off governor, a vertical Troy engine with throttle governor, a Sturtevant steam turbine, and a condenser with air ejector, aftercondenser, and accessories. Additional steam equipment includes calorimeters, an orifice apparatus, and an injector.

INTERNAL COMBUSTION ENGINES: A section of the west side of the laboratory contains Nash and Ford automobile engines and a 10-hp Stover Diesel engine with generator, all instrumented for determination of their characteristics and performance. Indicator diagrams are obtained with a mechanical indicator or with a Li pickup, amplifier, volume signal generator, and oscilloscope. The laboratory also contains a 7.5-hp Diesel engine with cradle dynamometer, a 6-cylinder Diesel engine-generator unit, a 4-cylinder gasoline engine-generator unit, a tractor-type gasoline engine, and cutaway Oldsmobile, Cadillac, and Wright Whirlwind engines.

AIR COMPRESSORS: A thorough study of air compression is afforded by the use of a Worthington 8 by 9-inch water-cooled single-stage compressor driven by a 25-hp a.c. motor and a Davey 2-stage V-type air-cooled compressor driven by a 25-hp d.c. motor.

FLUID APPARATUS: A section of the east side of the laboratory contains a Cameron centrifugal pump driven by a variable-speed motor, together with a series of weirs and orifices. Another centrifugal pump delivers water to a turbine having a transparent casing, while nearby is an apparatus for the measurement of water friction in pipes and fittings. On the upper level are a centrifugal fan fitted with orifices and a pitot-static tube, and a second fan discharging through pipes and fittings for the measurement of duct friction. A small 45-mph wind tunnel is used for the measurement of lift, drag, and pressure distribution on models.

LUBRICANT, FUEL, AND FEEDWATER TESTING: In the south end of the main laboratory are five rooms completely equipped for measurement of the properties of solid, liquid, and gaseous fuels and of lubricating oils, and for chemical analysis of feedwater.

HEATING, AIR CONDITIONING, AND REFRIGERATION: A domestic hand-fired steam boiler and a domestic oil-burning hot-water furnace are provided, together with a steam-heated radiator and convector. An operating refrigerating unit having transparent parts distributed on a panel is used for qualitative study. A 5-ton refrigerating machine employing York Freon-12 compressors is under construction.

INSTRUMENT ROOM: This room provides a full supply of instruments including indicators, tachometers, planimeters, stop-watches, velometers, thermometers, thermocouples, potentiometers, pressure gages, deadweight testers, scales, and other devices.

METALLOGRAPHY AND STRESS ANALYSIS LABORATORY

This laboratory contains a 1000-magnification Leitz metallurgical microscope with photographic equipment, a darkroom, polishing equipment, a specimen mounting press, and a small automatically controlled furnace, permitting a study of the grain and crystal structure of metals and of the effects of heat treatments.

A large polariscope affords measurement and visual observation of stresses in plastic models. Electronic equipment comprising wire strain gages, an amplifier, and an oscilloscope permit the direct measurement of strains as small as one microinch.

SHOPS

Adequate facilities are provided for the maintenance of the laboratories, for student and faculty projects, and for special instruction.

METAL SHOP: This shop, located on the upper level of the main laboratory, contains three lathes with accessories, a drill press, an arbor press, a precision grinder, a tool grinder, a milling machine, a shaper, a variety of small tools and accessories, and adequate stocks of materials.

WOOD SHOP: This shop, located on the top floor of the building, contains a lathe, a drill press, a planer, a band saw, a jig saw, two circular saws, a shaper, and a variety of accessories and small tools.

WELDING AND BRAZING EQUIPMENT: A 200-ampere arc welding machine and complete oxy-acetylene welding and cutting equipment are provided, together with materials and accessories.

Program of Studies for the Degree of Bachelor of Science in Mechanical Engineering

Freshman Year

FIRST SEMESTER

		S.H.
Math 5	College Algebra	3
Math 6	Trigonometry	3
Chem 1	Chemistry	4
Engl 1	English Composition	3
Hist E1	History	3
GE 1	Drawing	2
	Physical Education	1

 19

SECOND SEMESTER

		S.H.
Math 50	Analytic Geometry	3
Math 51	Calculus I	3
Chem 2	Chemistry	4
Engl 2	English Composition	3
Hist E2	History	3
GE 2	Descriptive Geometry	2
	Physical Education	1

 19

Air Force ROTC students: AS 1 (2 s.h.) is substituted for Hist E1 and AS 2 (2 s.h.) is substituted for Hist E2 above.

Naval ROTC students: NS 101 (3 s.h.) is substituted for Hist E1 and NS 102 (3 s.h.) is substituted for Hist E2 above

Sophomore Year

FIRST SEMESTER

		S.H.
Math 52	Calculus II	3
Phys 51	Physics	5
Econ 51	Economics	3
GE 57	Statics	3
ME 53	Materials	3
ME 57	Processes	2
	Physical Education	1

 20

SECOND SEMESTER

		S.H.
Math 53	Calculus III	3
Phys 52	Physics	5
Econ 52	Economics	3
ME 52	Kinetics-Mechanism	4
Engl E93	Advanced Composition	3
	Physical Education	1

 19

Air Force ROTC students: AS 51 (2 s.h.) and AS 52 (2 s.h.) are substituted for Econ 51-52 above.

Naval ROTC students: NS 201 (3 s.h.) and NS 202 (3 s.h.) are substituted for Econ 51-52 above.

Junior Year

FIRST SEMESTER

		S.H.
ME 101	Thermodynamics	3
ME 113	Mech. Eng. Laboratory	1
ME 105	Fluid Mechanics	3
GE 107	Strength of Materials	3
GE 109	Materials Laboratory	1
EE 123	Electric Circuits	4
Engl 151	Public Speaking	3

 18

SECOND SEMESTER

		S.H.
ME 102	Thermodynamics	3
ME 114	Mech. Eng. Laboratory	2
ME 108	Aeronautics	3
ME 106	Heat Transfer	3
ME 150	Machine Design	3
EE 124	Electric Machinery	4

 18

Air Force ROTC students: AS 101-102 (8 s.h.) are substituted for Engl 151 and ME 108 above.

Naval ROTC students: NS 301 (3 s.h.) and NS 302 (3 s.h.) are substituted for Engl 151 and ME 108 above.

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
ME 151	Machine Design	4	ME 158	Industrial Engineering	3
ME 155	Internal Combustion Engines	3	ME 162	Power Plants	3
ME 153	Heating—Air Conditioning.	3	ME 154	Refrigeration	3
ME 159	Mech. Eng. Laboratory ...	2	ME 160	Mech. Eng. Laboratory	2
	*Approved Free Electives ...	6		*Approved Free Electives ...	6
		—			—
		18			17

Air Force ROTC students: AS 201-202 (8 s.h.), Engl 151 and ME 108 are substituted for the free electives.

Naval ROTC students (candidates for a Navy commission): NS 402 (3 s.h.) and Econ 51-52 (6 s.h.) are substituted for free electives above.

Naval ROTC students (candidates for a Marine Corps commission): NS 401M (3 s.h.) and NS 402M (3 s.h.) are substituted for free electives.

Courses of Instruction

52. KINETICS-MECHANISM.—Motions of particles. Applications of Newton's laws of motion to motions of rigid bodies. Work, energy, impulse, and momentum. Linkages, cams, gears, trains of mechanism. Three recitations, three laboratory hours. Prerequisites: GE 2, GE 57, Mathematics 52. 4 s.h.

ASSISTANT PROFESSORS FULTON, HOLLAND AND L. C. WILBUR
AND MR. MACCONOCHIE

53. MATERIALS.—Mechanical properties of materials; elementary metallurgy; heat treatment, properties and selection of iron, steel, copper, brass, aluminum, plastics, and other common materials. Lectures and recitations supplemented with films and demonstrations. Prerequisite: Chemistry 2. 3 s.h.

ASSISTANT PROFESSOR L. C. WILBUR AND MESSRS. SMITH AND MACCONOCHIE

57. PROCESSES.—Lectures and recitations covering casting, forging, welding, bending, rolling, drawing, machining, and other common processes. Interchangeable manufacture, metal fits, production methods. Supplemented with films and demonstrations. 2 s.h.

ASSISTANT PROFESSOR FULTON AND MR. MACCONOCHIE

101-102. ENGINEERING THERMODYNAMICS.—A study of thermodynamic properties and processes of gases, vapor and gas-vapor mixtures; cycles; efficiencies and performance of steam power plant equipment. Three recitations. Prerequisites: Mathematics 52, Physics 52, Chemistry 2. 6 s.h.

PROFESSOR R. S. WILBUR

103-104. HEAT POWER ENGINEERING.—A short course in engineering thermodynamics with applications to power plant design, for CE and EE students only. Three recitations. Prerequisites: Chemistry 2, Mathematics 52, Physics 52. 6 s.h.

ASSOCIATE PROFESSOR REED, ASSISTANT PROFESSORS FULTON AND L. C. WILBUR

105. FLUID MECHANICS.—Fluid statics; kinematics of fluid flow; application of fluid dynamics theory to flow through orifices, weirs, and pipes; general principles of centrifugal pumps and turbines. Prerequisites: Mathematics 52, Physics 52. 3 s.h.

ASSOCIATE PROFESSOR KENYON

106. HEAT TRANSFER.—Conduction, radiation and convection; heat transfer to boiling liquids or condensing vapors; over-all transfer of heat, steady state or variable flow. Applications to heat power, heating and air conditioning, and refrigeration. Prerequisites: ME 101 or 103, ME 105 or GE 128. ME 102 or 104 concurrently. May be elected by limited number of CE and EE students. 3 s.h.

ASSOCIATE PROFESSOR REED

* It is recommended that 6 of the required 12 semester hours of free electives in the senior year be taken in liberal arts.

108. AERONAUTICS.—A general course applying fluid mechanics principles to airfoils, propellers, and the complete airplane. Prerequisite: ME 105. 3 s.h.

ASSISTANT PROFESSOR ELSEVIER

113-114. JUNIOR MECHANICAL ENGINEERING LABORATORY.—Open only to mechanical engineering students. First semester, three laboratory hours, devoted to experiments and reports in hydraulics, flue gas analyses, calorific value of fuels. Second semester, six laboratory hours, devoted to experiments and reports related to thermodynamics, such as boiler inspection, air compression, injectors, steam and fuel calorimetry. ME 101-102 concurrently. 3 s.h.

STAFF

115-116. JUNIOR MECHANICAL ENGINEERING LABORATORY.—Open only to electrical and civil engineering students. Experiments and reports on measuring instruments and apparatus, flow of air, steam and water, economy of boilers, steam and internal combustion engines. Three laboratory hours. ME 103-104 concurrently. 2 s.h.

STAFF

150-151. MACHINE DESIGN.—Application of principles of mechanics, strength of materials, constructive processes and engineering drawing to the design of bolted, riveted and welded connections, pressure vessels and machine elements, followed by design of at least one complete machine. ME 150 has two recitations and three laboratory hours; ME 151 has two recitations and six laboratory hours. Prerequisites: GE 107, ME 52, ME 53, ME 57. 7 s.h.

ASSISTANT PROFESSOR HOLLAND AND MR. MACCONOCHIE

153-154. HEATING, AIR CONDITIONING AND REFRIGERATION.—Determinations of heat losses and gains; design of steam, hot water and warm air heating and air conditioning systems; panel heating. Fundamentals of refrigeration theory and design. Applications of refrigeration to summer and year round air conditioning; commercial and industrial applications of refrigeration. Prerequisite: ME 106. ME 159-160 concurrently. Two recitations, three laboratory hours. 6 s.h.

ASSOCIATE PROFESSOR REED

155. INTERNAL COMBUSTION ENGINES.—Principal cycles; fuels and fuel mixtures; effect of real mixtures on theoretical cycles; combustion; carburetion and fuel injection. Thermodynamic analysis of engine performance. Modern development in the internal combustion engine. Three recitations. Prerequisite: ME 101-102. 3 s.h.

ASSISTANT PROFESSORS ELSEVIER AND FULTON

157. *CENTRIFUGAL PUMPS AND BLOWERS.—A study of the basic principles of design, construction and application of centrifugal pumps and blowers. May be elected by a limited number of mechanical engineering seniors with consent of Chairman of Department. Prerequisite: ME 105. 3 s.h.

ASSISTANT PROFESSOR FULTON

158. INDUSTRIAL ENGINEERING.—A study of the industrial growth and present tendencies of productive industries as concerns the engineer. Specific topics treated are: plant location, organization, production and cost controls, wage payment, etc. Seniors only. Three recitations. 3 s.h.

ASSOCIATE PROFESSOR KENYON AND MR. SMITH

159. SENIOR MECHANICAL ENGINEERING LABORATORY.—Tests and reports on performance and economy of internal combustion engines, steam engines and turbines; heat transfer, radiator tests, and energy balances. Required of all seniors in mechanical engineering. Six laboratory hours. Prerequisite: ME 114. ME 153 concurrently. 2 s.h.

STAFF

160. SENIOR MECHANICAL ENGINEERING LABORATORY.—Required of all seniors in mechanical engineering. Tests and reports on boiler, engine, turbine, condenser and accessories; heat transfer; refrigeration equipment. Six laboratory hours. Prerequisite: ME 159. ME 154 and ME 162 concurrently. 2 s.h.

STAFF

* Offered only upon sufficient demand; enrollment limited.

162. **POWER PLANT CALCULATIONS.**—Study of economic and engineering factors in developing steam power plants. Consideration of the performance of boilers, prime movers, condensers and various auxiliaries in various groupings as they affect the plant heat balance. May be elected by limited number of CE or EE students. Three recitations. Prerequisite: ME 102 or ME 104. ME 160 concurrently. 3 s.h. PROFESSOR R. S. WILBUR

164. ***ENGINEERING ANALYSIS.**—A study of a series of engineering problems with particular reference to mathematical and graphical methods of solution and engineering interpretation of results. 3 s.h. ASSISTANT PROFESSOR L. C. WILBUR

166. ***AIR-CONDITIONING DESIGN.**—Analysis of air-conditioning requirements, summer and winter, commercial and industrial. Design of systems and units, and selection of equipment. Open to seniors who have completed ME 153. 3 s.h. ASSOCIATE PROFESSOR REED

197-198. **PROJECTS IN MECHANICAL ENGINEERING.**—This course may be assigned by the Chairman of the Department to certain seniors who express a desire for such work and who have shown aptitude for research in one distinct field of mechanical engineering. Elective credit for either semester. 3-6 s.h. STAFF

* Offered only upon sufficient demand; enrollment limited.

THE COLLEGE OF ENGINEERING



WEST CAMPUS DUKE UNIVERSITY

The profession of engineering offers greater opportunities today than ever before. In June 1954 American colleges will grant approximately 17,000 engineering degrees. This is a decline of more than 33 per cent from 1952. At present there is a shortage of 60,000 engineering graduates, and it is estimated that the nation will need 30,000 annually for many years to come. In September 1957, when the present high-school senior will begin his last year of college, this shortage may reach 100,000. The situation is critical not only to industry but to our country in its present defense and security effort to prepare for what the future may hold.

Thus it is clear that today the high-school graduate who is interested in engineering has a unique chance to contribute to the national defense program at the same time that he is equipping himself for a career in an honored profession. He will find a challenge, an opportunity for rapid advancement, and a financial reward unequalled in history.

Duke takes this occasion to make known to you the present critical situation. Please call this bulletin and this announcement to the attention of all young women and men who may be interested.

BULLETIN
OF
DUKE UNIVERSITY



The School of Forestry

ANNOUNCEMENTS FOR 1954-55

VOLUME 26

January, 1954

NUMBER 3-B

Annual Bulletins

FOR GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

FOR BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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BULLETIN
OF
DUKE UNIVERSITY

THE SCHOOL OF FORESTRY



ANNOUNCEMENTS FOR 1954-55

DURHAM, NORTH CAROLINA
1954

Contents



	PAGE
SCHOOL OF FORESTRY CALENDAR.....	4
OFFICERS OF ADMINISTRATION.....	5
FACULTY OF THE SCHOOL OF FORESTRY.....	6
DUKE FOREST STAFF.....	6
FORESTRY IN DUKE UNIVERSITY: General Statement.....	8
Educational Facilities	9
The Duke Forest.....	11
The Arboretum.....	13
FELLOWSHIPS, SCHOLARSHIPS, AND GRADUATE ASSISTANTSHIPS IN FORESTRY.....	15
TUITION, FEES, AND EXPENSES.....	18
REQUIREMENTS FOR ADMISSION TO THE SCHOOL OF FORESTRY.....	20
COOPERATIVE PLAN OF STUDY WITH SELECTED COLLEGES AND UNIVERSITIES.....	22
REQUIREMENTS FOR THE DEGREE OF MASTER OF FORESTRY.....	24
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF FORESTRY.....	26
FORESTRY IN THE GRADUATE SCHOOL.....	29
COURSES AND SUBJECTS OF INSTRUCTION.....	30
ENROLLMENT, 1953-54.....	35

School of Forestry Calendar



1954

- | | | |
|-------|----|--|
| June | 9 | Wednesday—Registration of students for summer work in forestry. |
| June | 10 | Thursday—Field work in Plane Surveying (C.E. S110) begins. |
| July | 8 | Thursday—Field work in Forest-Tree Identification (For. S149) begins. |
| July | 15 | Thursday—Field work in Forest Surveying (For. S150) begins. |
| Aug. | 12 | Thursday—Field work in Forest Mensuration (For. S151) begins. |
| Sept. | 21 | Tuesday—Registration of students in the School of Forestry. |
| Sept. | 23 | Thursday—Instruction begins in the School of Forestry. |
| Nov. | 24 | Wednesday, 5:00 P.M.—Thanksgiving recess begins. |
| Nov. | 29 | Monday, 8:00 A.M.—Instruction is resumed. |
| Dec. | 6 | week of, German examinations for candidates for doctorate degrees.
Candidates register in the Graduate School Office for these examinations not later than November 29. |
| Dec. | 11 | Saturday—Founders Day. |
| Dec. | 18 | Saturday, 12:30 P.M.—Christmas recess begins. |

1955

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|-------|----|---|
| Jan. | 3 | Monday, 8:00 A.M.—Instruction is resumed. |
| Jan. | 12 | French examinations for candidates for doctorate degrees. Room 210, Divinity School. Candidates register in the Graduate School Office for these examinations not later than January 5. |
| Jan. | 18 | Tuesday—School of Forestry mid-year examinations begin. |
| Jan. | 28 | Friday—School of Forestry mid-year examinations end. |
| Jan. | 31 | Monday—Registration of students in the School of Forestry. |
| Feb. | 2 | Wednesday—Second semester begins. |
| March | 26 | Saturday, 12:30 P.M.—Spring recess begins. School of Forestry Coastal Plain field work begins. |
| April | 4 | Monday, 8:00 A.M.—Instruction is resumed. |
| April | 11 | Monday, 8:00 A.M.—Coastal Plain field work ends. |
| April | 15 | Friday—Last day for submitting Doctor of Forestry theses. |
| April | 15 | French examinations for candidates for doctorate degrees. Room 210, Divinity School. Candidates register in the Graduate School Office for these examinations not later than April 5. |
| May | 9 | week of, German examinations for candidates for doctorate degrees.
Candidates register in the Graduate School Office for these examinations not later than May 2. |
| May | 16 | Monday—Last day for submitting Master of Forestry theses. |
| May | 23 | Monday—School of Forestry final examinations begin. |
| June | 2 | Thursday—School of Forestry final examinations end. |
| June | 4 | Saturday—Commencement begins. |
| June | 5 | Sunday—Commencement Sermon. |
| June | 6 | Monday—Commencement address and graduating exercises. |

Officers of Administration



EDENS, ARTHUR HOLLIS, A.B., A.M., Ph.D., LL.D. <i>President of the University</i>	West Campus
WANNAMAKER, WILLIAM HANE, A.B., A.M., Litt.D. <i>Vice-Chancellor of the University</i>	West Campus
GROSS, PAUL MAGNUS, B.S., A.M., Ph.D. <i>Vice-President in the Division of Education</i>	Hope Valley
JORDAN, CHARLES EDWARD, A.B., LL.D. <i>Vice-President in the Division of Public Relations</i>	813 Vickers Avenue
HERRING, HERBERT JAMES, M.A., LL.D. <i>Vice-President in the Division of Student Life</i>	2010 Myrtle Drive
BROWER, ALFRED SMITH, A.B. <i>Business Manager and Comptroller</i>	West Campus
MARKHAM, CHARLES BLACKWELL, A.B., A.M. <i>Treasurer</i>	204 Dillard Street
KORSTIAN, CLARENCE FERDINAND, B.S.F., M.F., M.A., Ph.D. <i>Dean of the School of Forestry</i>	4 Sylvan Road

COMMITTEE OF THE BOARD OF TRUSTEES ON THE SCHOOL OF FORESTRY

R. G. CHERRY, B. F. FFW, N. E. EDGERTON, J. R. SMITH

Faculty of the School of Forestry



ANDERSON, ROGER FABIAN, B.S., M.S., Ph.D. <i>Associate Professor of Forest Entomology</i>	2528 Perkins Road
CHAIKEN, LEON EDWARD, B.S.F., M.F. <i>Associate Professor of Forest Management</i>	912 Monmouth Avenue
*COILE, THEODORE STANLEY, B.S.F., M.F., Ph.D. <i>Professor of Forest Soils</i>	Laurel Ridge Farm, Hillsboro Road
HARRAR, ELLWOOD SCOTT, B.S., M.S., Ph.D. <i>Professor of Wood Technology</i>	2228 Cranford Road
KORSTIAN, CLARENCE FERDINAND, B.S.F., M.F., M.A., Ph.D. <i>Professor of Silviculture</i>	4 Sylvan Road
KRAMER, PAUL JACKSON, A.B., M.Sc., Ph.D. <i>Professor of Botany</i>	2251 Cranford Road
RALSTON, CHARLES WILLIAM, B.S., M.F., Ph.D. <i>Assistant Professor of Forest Soils</i>	Duke University
SCHUMACHER, FRANCES XAVIER, B.S. <i>Professor of Forestry</i>	6 Sylvan Road
STOLTENBERG, CARL HENRY, B.S., M.F., Ph.D. <i>Assistant Professor of Forest Economics</i>	942 Lambeth Circle
WACKERMAN, ALBERT EDWARD, B.S., M.F. <i>Professor of Forest Utilization</i>	3610 Dover Road, Hope Valley
WOLF, FREDERICK ADOLPHUS, A.B., A.M., Ph.D. <i>Professor of Botany</i>	924 Urban Avenue

Duke Forest Staff

KORSTIAN, CLARENCE FERDINAND, B.S.F., M.F., M.A., Ph.D. <i>Director</i>	4 Sylvan Road
CHAIKEN, LEON EDWARD, B.S.F., M.F. <i>Assistant Director</i>	912 Monmouth Avenue
BLACKMON, MANLY RANKIN <i>Superintendent</i>	2321 Erwin Road
KEITH, MRS. ELIZABETH <i>Bookkeeper</i>	1615 Angier Avenue

Duke Arboretum

HARRAR, ELLWOOD SCOTT, B.S., M.S., Ph.D. <i>Director</i>	2228 Cranford Road
---	--------------------

* Resigned, January 31, 1954.

Technical Assistants in Forestry

*CROCKETT, JOSEPH MCGAVOCK, B.S.	Men's Graduate Center
*DAVIS, FRANCIS GUY, B.S.	820 Wilkerson Avenue
*HOCKER, HAROLD WILLETTS, JR., B.S., M.F.	Apt. F-7, Westover Apts.

Assistants in School Administration

CONRAD, MRS. WINNIE W. <i>Recorder and Secretary to the Dean</i>	Hillsboro, N. C.
McMANNEN, MRS. NANCY A. <i>Secretary</i>	1905 Hart Street
MELCHERS, MRS. MARLENE N. <i>Secretary</i>	1012 Carolina Avenue
*BOOTHE, JEANNE <i>Statistical Clerk</i>	712 First Avenue
†HARRELL, MRS. JEAN <i>Statistical Clerk</i>	Apt. B-3A, University Apartments
* Employed part-time.	
† Resigned, December 31, 1953.	

Forestry in Duke University



General Statement

DUKE UNIVERSITY, located at Durham, North Carolina, comprises Trinity College, the Woman's College, the College of Engineering, the Graduate School of Arts and Sciences, the Divinity School, and the professional schools of Forestry, Law, Medicine, and Nursing. Nearly every state of the Union and several nations are represented in the student body of more than five thousand, not including the enrollment in the Summer Session.

The University goes back in its origin to 1838, when Union Institute was founded in Randolph County by the Methodists and Friends. In 1851 the institution became Normal College, one of the first schools in America for the training of teachers. In 1859 the name was changed to Trinity College and so continued until 1924, when the College became a part of Duke University.

By virtue of an indenture of trust, executed December 11, 1924, by James Buchanan Duke, a great benefaction was placed at the disposal of humanity by providing for hospitalization, church work in rural communities, and education. The principal feature of the educational provision was the creation of Duke University.

The University occupies two campuses. The Woman's College campus, with its 108 acres, was formerly the campus of Trinity College. About a mile to the west are the new units of the University. The new campus, totaling 467 acres, also known as the West Campus, was first occupied in September, 1930.

Forestry in Duke University began early in 1931, when, through placing the Duke Forest under intensive management for forestry purposes, a substantial beginning was made in laying the foundation for educational work and research in forestry.

An academic-forestry curriculum, designed for students intent upon pursuing the study of forestry, particularly as a profession after graduation, was organized in Trinity College of Duke University in 1932 (see *Announcement on Undergraduate Instruction in Duke University*). This course of study provides only for instruction in fundamental and auxiliary subjects basic to a proper understanding of the highly specialized work in technical forestry. Duke University offers no professional degree in technical forestry available to undergraduates.

Training in technical forestry leading to the professional degrees, Master of Forestry and Doctor of Forestry, is offered in the School of Forestry, and is open to graduates of recognized scientific schools or colleges, universities, and professional schools of forestry and to other men who meet the entrance requirements of the school (see p. 20).

Duke University is also prepared to offer, through the Graduate School of Arts and Sciences, graduate work in the more scientific aspects of forestry leading to the Master of Arts and Doctor of Philosophy degrees. This work is available to graduates of schools of forestry of recognized standing, and to college or university graduates holding the Bachelor's degree with their major work in appropriate scientific subjects. Undergraduate subjects which the college student, who does not have forestry training but who is contemplating work toward either degree in forestry, should take in preparation for this work may be illustrated as follows: At least two full years in botany, including general morphology or anatomy, the taxonomy, physiology, and ecology of plants; at least one course in zoology or general biology; courses in chemistry, physics, geology, economics, mathematics; and at least two years of French or German.

Several staff members of the Southeastern Forest Experiment Station are engaged in cooperative research projects in the Duke Forest. Specialists from this station and other prominent members of the U. S. Forest Service and representatives of forest and wood-using industries give occasional scheduled lectures at the School.

Educational Facilities

The School of Forestry is located in the Social Science and Biology Buildings on the West Campus. The School is provided with instruments and tools for use in both field and laboratory work in silvics, silviculture, harvesting, and forest mensuration. Modern surveying instruments and accessory equipment are available for work in forest surveying.

Fully equipped laboratories are provided for work in forest entomology, wood anatomy and properties, timber mechanics, and bonding of wood. A modern forest soils laboratory equipped for physical and chemical studies is available. In the field of seasoning and preservation of wood, a laboratory fully equipped with an experimental dry kiln, pressure treating cylinder, and vapor drying cylinder is available for instruction and research.

Facilities are also available for advanced work in plant physiology, plant anatomy, plant taxonomy, genetics, plant ecology, plant pathology, and the several branches of zoology.

The School of Forestry Library contains a growing collection of material on forestry and related subjects. It includes important books and periodicals in English and in French, German, and other foreign languages. The Library is well provided with American material, including Federal and State documents and reports. Over 150 periodicals and serials of importance in forestry and related fields are received by subscription or exchange.

Greenhouses, connected to the Biology Building through a soil-storage and work room, provide adequate space for experimental work.

A nursery has been established by the University for joint use of the Sarah P. Duke Floral Garden, the Botany Department, and the School of Forestry. The forestry section of this nursery is used mainly for the growing of planting stock for the Arboretum and trees needed for research or other special purposes.

West Virginia Pulp and Paper Company has made available to Duke University a field headquarters for work in forests of the South Atlantic Coastal Plain located 18 miles northwest of Summerville, South Carolina. This company has extensive forest holdings under close supervision of a staff of technical foresters in South Carolina and permits access to its lands for instruction and research in forestry and allied fields. This headquarters camp with modern facilities for as many as 45 men is used as a base primarily for utilization work each spring and for special work in silviculture. The quarters may be available at other times for students and faculty members of the Duke School of Forestry working on special problems or doing advanced work in any of the fields of forestry concerned with coastal plain problems. The establishment of this headquarters camp in the coastal plain region makes it possible for the School of Forestry to provide instruction and conduct research in this important forest area in which many privately owned forests as well as public forests are intensively managed for the production and utilization of a wide range of forest products. The Southern Railway Demonstration Forest is within easy reach of this center and will also be available for work, particularly with longleaf pine.

The School sponsors occasional lectures on forestry and conservation by speakers of national reputation.

An active Forestry Club is maintained as a student organization to bring the members of the School and students in the undergraduate academic-forestry curriculum into closer contact and to afford opportunities for extracurricular activities not otherwise available.

The Duke Forest

The Duke Forest, located in Durham and Orange counties, North Carolina, consists of five main units: namely, the Durham, New Hope Creek, Hillsboro, Eno, and Blackwood divisions. Early in the development of Duke University it was recognized that the possession of such an area offered an unusual opportunity for the development of educational work in forestry.

Situated on the lower Piedmont plateau at elevations ranging from 280 to 760 feet, and composed of second-growth shortleaf, loblolly, and Virginia pines, oak, gum, hickory, maple, yellow poplar, ash, and other hardwoods, the Forest is representative of the various types of timber growth found throughout the region. Over a hundred different species of trees are found within or near the Forest. The land is rolling and there is relatively little rock outcrop, swamp, or other land of low productivity for timber growing. The total area of the Forest proper, exclusive of the University campus, is approximately 7,600 acres.

In developing the Duke Forest the following objectives are being emphasized:

1. Demonstration of various methods of timber growing, silvicultural treatment, and forest management applicable to the region.

2. Development as an experimental forest for research in the problems of timber growing and in the sciences basic thereto. In spite of the present timber situation and the accompanying economic ills, the technical and scientific knowledge required to handle forest crops efficiently on a permanent basis is still largely lacking. The Duke Forest affords a place where studies may be carried on to augment this knowledge for the large region of which the local forest and soil conditions are representative.

3. To serve as an outdoor laboratory where field work can be carried on by forestry students under the guidance of the Forestry Faculty. One of the most difficult problems in forestry education is to bring the students into contact with the realities of professional activities. With all operations in the Forest, both routine and research, recorded annually, it is possible for a qualified man to get in a short time a degree of practical knowledge or technical expertness which only an organized forest can provide.

The Duke Forest is particularly well located to serve as a field laboratory, since most of it is adjacent and easily accessible to the University campus. In fact, the Durham division practically surrounds the West Campus, which was laid out in one corner of the Forest. A paved State highway runs lengthwise through the Durham division, and several good roads cross the Forest. About fifteen miles of improved woods roads make all parts of the Forest readily accessible. A five-minute walk will take one well into the Forest, and any part of the

Durham or New Hope Creek divisions can be reached by automobile in from ten to twenty minutes. At few other places in America can be found provisions for forestry training and research which includes the necessary forest literally at the door of a large university with its instructional, laboratory, and library facilities.

Approximately 1,400 acres of the Forest was open land, which had been under cultivation prior to the establishment of the Forest. Such of the open land as was not restocking naturally to forest trees was planted. Arbitrarily by mixing species and varying the spacing between the trees in the plantations, the foundation was laid for future research into many perplexing problems, such as species relationships and requirements, the most desirable spacing and species to use in this region, and the survival and relative rates of growth of the different species of trees. To date approximately 1,400 acres of such plantations have been established. Pulp-wood thinnings on a commercial basis are now being made in a number of the older pine plantations.

A large number of permanent sample plots, ranging in size from one-tenth acre to over one acre, have been laid out in the Forest to study various problems. The plots are distributed through all the forest types, and range in purpose from studies of the effects of various silvicultural practices to studies of rates of growth and yields of the different timber types. Accurate records are kept on all this work, which will provide excellent material for student research. In the future many of these plots can also be used to demonstrate desirable forestry practices.

The development of the Forest as a demonstration of practical forest management is well advanced. Forest type and timber stand maps are available for each of four divisions except for recently acquired areas. A detailed soils map for the entire area is being prepared. Except for very recent acquisitions, each division has been subdivided into permanent compartments, and plans for the silvicultural treatment of each stand and working group have been formulated. The third ten-year inventory of the Forest resources has been completed and the results of management practices during the past twenty years are being assembled and will soon be available.

Cutting operations within the limits of annual growth are being carried on, and, as markets for definite products are developed or expanded, such operations will be increased. To date, approximately 1,300 acres in the pine types have been thinned. These thinnings serve the dual purpose of contributing to the operation of the Forest as a going business and of demonstrating sound forestry practices. An efficient fire protection organization has been developed in cooperation with the State and Federal governments, and forest fire losses are being held to a minimum. In managing the Forest, public recreation activities are recognized. Several recreation areas have been established,

and over ten thousand picnickers, hikers, and horseback riders use the area annually. The Durham and New Hope Creek divisions of the Forest, together with several hundred acres of neighboring privately owned land, are incorporated in an Auxiliary State Game Refuge, and a number of wildlife management practices are being applied to designated areas in the Forest to provide the necessary food and protection which will ultimately result in an increased amount of game in the surrounding territory. Records are being maintained of all activities in the Forest, and these records will become increasingly useful as they are improved as a result of further experience and research. With the diversification and expansion of activities now going on, students have an opportunity to study an operating forest in all its phases and to obtain a grasp of the proper balance between theory and practice.

The Forest is admirably located for research in forest soils. An unusually large number of different soil conditions occur in the Forest because of the diversity of parent rock, topography, and past land culture. Major soil differences are due to the nature of the parent material which includes the basic rock of the Carolina Slate formation, granites, Triassic sedimentary rock, and many types of basic intrusives.

An exceptionally good opportunity exists for the conduct of forest research by graduate students due to the wide range in forest types, ages, and soil conditions within the Forest and its proximity to the laboratories, greenhouses, and other scientific equipment and library facilities of the University. Research is being conducted on special problems, particularly in the fields of silvics, forest soils, forest-tree physiology, forest entomology, forest pathology, silviculture, forest management, and wood technology. The Forest is used not only for research in forestry but also for research in forest biology by members of allied departments.

The Arboretum

Of outstanding value in the teaching of both forestry and botany in the future is the provision for the development of an arboretum. Recently the Board of Trustees of Duke University voted to set aside permanently an area of over 90 acres to be used for arboretum purposes. The area lies between the East and West campuses along either side of Myrtle Drive. This is naturally a long-time project, and many years will elapse before the Arboretum will be most useful and most attractive. The University Trustees' Committee on Forestry in its report to the Board refers to the Arboretum as follows:

"The Arboretum should serve as a station for the study of trees and woody plants as individuals and in small groups in their scientific relations, economic properties, and cultural characteristics, require-

ments, and possibilities. It should render an economic service by acting as a research laboratory where trees and shrubs can be studied from the viewpoint of a fuller utilization of their commercial possibilities. It should render a cultural service by serving as a center where foresters, landscape architects, nurserymen, gardeners, and the general public may increase their knowledge of indigenous trees and shrubs and where they may become acquainted with the foreign species that can be grown here. Within the University the Arboretum will supply living specimens and materials for several branches of botany and forestry."

The development of the Arboretum will proceed along these lines as rapidly as available funds and planting stock will permit.

Fellowships, Scholarships, and Graduate Assistantships in Forestry



A NUMBER of fellowships, scholarships, and research assistantships are available to men who offer promise of becoming leaders in the forestry profession. These will be awarded for high character and marked scholastic ability as judged by education, experience, and personal references.

Holders of the awards will pay tuition and such additional fees as are regularly required.

The awards are of three classes with stipends and special conditions as follows:

(1) Fellowships of \$600 to \$1,000 each. Each recipient must have previously completed work equivalent to that required at Duke University for a Master's degree with major in forestry or in a discipline basic to forestry. He will devote his time to an approved program of study and research in any of the branches of forestry. He is expected to become a candidate for the degree of Doctor of Forestry or Doctor of Philosophy.

(2) Scholarships of \$250 to \$700 each. Each recipient will normally devote his time to an approved program of study leading to the degree of Master of Forestry or Master of Arts with a major in forestry.

Holders of fellowships and scholarships will be expected to do a limited amount of assisting.

(3) Graduate assistantships of \$1,000 each. Each recipient will devote half-time to research or other work of the School of Forestry. He will be permitted to enroll for not more than 20 semester hours in a school year on a program of study, or study and research, leading to the degree of Master of Forestry, Master of Arts, Doctor of Forestry, or Doctor of Philosophy.

The following arrangements are common to the above fellowships, scholarships and research assistantships in forestry:

(1) Each applicant must have met the entrance requirements of the School of Forestry and must show high scholarship. Preference will be given to men who have already obtained technical or professional training in forestry or who have been previously enrolled in the School of Forestry.

(2) It is highly desirable that each applicant state as specifically as possible the field in which he wishes to study. The definite selection of a major field of work—one that is specific in purpose and involves training both in fundamentals and in technique—is very helpful to the Committee on Awards.

(3) Application blanks for fellowships, scholarships, and research assistantships may be obtained by writing to the Dean of the School of Forestry, Duke University, Durham, North Carolina. When the blank has been filled out by the applicant, it should be returned to the above address, and an *official transcript of record* showing college or university credits must accompany it or be forwarded promptly. The application and transcript must be filed not later than March 1 for consideration for the following academic year. In case vacancies occur, applications submitted on a later date may be considered.

Each year one fellowship in the amount of \$1,200 is awarded by the Union Bag and Paper Corporation, of Savannah, Georgia, upon the recommendation of a special awards committee, to a graduate forester, selected on the basis of merit, ability and interest in the field of industrial forestry, for graduate study at the School of Forestry of Duke University. A fund of \$400.00 in addition to the fellowship stipend is available for payment of actual expenses incurred in the conduct of the recipient's research.

To be eligible for the fellowship an applicant must meet the following qualifications:

a. He must be a graduate of the School of Forestry, Alabama Polytechnic Institute; or School of Forestry, University of Florida; or George Foster Peabody School of Forestry of the University of Georgia; or School of Forestry, N. C. State College; or a resident of the State of Georgia and have earned at least a bachelor's degree in forestry at another institution of higher learning.

b. He must have the quality point grade average required for admission to the School of Forestry.

c. He must be of good character and show promise of ability to do creditable graduate work in forestry. This is evaluated by the awards committee on the basis of letters of recommendation, scholastic standing, a personal interview, and in such other ways as the committee may specify.

d. He must be interested in a career in a field of forestry that is concerned with the management, harvesting, or utilization of industrial forest properties, particularly in the South.

Those interested in applying for the Union Bag and Paper Corporation Forestry Fellowship should write to the Dean of the School of Forestry for application forms or for further information. Applications, with supporting papers, must be in the hands of the Committee not later than March 1 preceding the academic year for which the

Fellowship will be granted. Announcement of the award will be made not later than April 1 of the same year.

A limited number of special research assistantships, sponsored by several pulp and paper companies, are available for work on a forest soil drainage project in the southeastern coastal plain. Men selected for the project will study toward masters' or doctors' degrees and students may use certain phases of the project to meet their research and thesis requirements. Further information will be supplied interested men upon request addressed to the Dean of the School of Forestry.

Tuition, Fees and Expenses



THE following table shows the general fees and charges collected from all students. All fees for each semester are due and payable, unless otherwise specified, at the time of registration at the beginning of that semester, and no student is admitted to classes until arrangements have been made with the Treasurer of the University for the settlement of fees.

General Fees

Tuition, per semester.....	\$175.00
General Fee, per semester.....	60.00

Forestry students may obtain admission to all regularly scheduled University athletic contests held on the University grounds during the entire academic year by payment of the athletic fee of \$10.00 per year plus any Federal taxes that may be imposed. This fee is payable in the fall semester.

Due to rising costs a readjustment in charges is being considered. In the event of an adjustment applicants will be notified.

TRANSCRIPTS: A student desiring to transfer from Duke University to another institution is entitled to one transcript of his record. A charge of one dollar is made for each additional copy.

PAYMENTS TO FELLOWS AND SCHOLARS: Payments by the University of stipends to fellows, research assistants, and scholars are made in four installments, on November 25, January 25, March 25, and May 25. Fellows and scholars are required to pay the regular tuition fee and such additional fees as are ordinarily required of graduate students.

Living Accommodations

The Men's Graduate Center containing bedroom facilities for four hundred men, complete with lounges, study rooms, recreational rooms, post office and dining hall, is available to men of the graduate and professional schools. The rooms are equipped for two persons and the rental charge is one hundred and twenty-five dollars (\$125.00) each semester or sixty-two dollars and fifty cents (\$62.50) each person each semester.

Rooms may be reserved by new applicants only if they have been officially accepted for admission by the University and if they have paid a room deposit of twenty-five dollars (\$25.00). The initial room reservation deposit is effective for the period of continuous attendance. It will be refunded within thirty days after the student's graduation. Upon the withdrawal of an accepted applicant or of an enrolled stu-

dent prior to graduation the room deposit is refundable provided the Housing Bureau is notified at least sixty days prior to the beginning of the term for which the room is reserved.

A resident student, in order to retain his room for the succeeding semester, must make application at the office of the Housing Bureau for confirmation of the reservation. In order to obtain a refund of his initial room deposit, he must cancel his room reservation sixty days prior to the registration date of the semester for which the room was reserved. All rooms which have not been reserved on or before an announced date will be considered vacant for the succeeding semester and will be reserved in the order in which applications are made.

Rooms are rented for no shorter period than one semester, unless by special arrangement with the Housing Bureau. A period of occupancy other than a semester and without special arrangement will be charged at a minimum rate of twenty-five dollars (\$25.00) or at a rate of one dollar each day of occupancy.

The exchange of rooms may be arranged at the Housing Bureau within fifteen days after the official opening of the semester or quarter of the school term. Thereafter a charge of two dollars (\$2.00) may be made. Persons exchanging rooms without the approval of the Housing Bureau will be subject to charges for both rooms.

The authorities of the University do not assume responsibility for the persons selected as roommates. Each student is urged to select his roommate when the room is reserved.

Beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are provided by the University. The student supplies linens, blankets and pillows. Rugs, if desired, are not to exceed fifty square feet in size.

Regulations governing the occupancy of rooms will be supplied directly from the Housing Bureau when room reservations are made. Occupants are expected to abide by these regulations.

ESTIMATED EXPENSES FOR AN ACADEMIC YEAR: The necessary expenses of a graduate student are moderate: the University dormitories provide thoroughly comfortable and wholesome living conditions at a minimum cost, while all charges made by the University have been kept low. Incidental expenses naturally depend upon the tastes and habits of the individual. The following table gives the necessary college expenses for one year:

	<i>Low</i>	<i>Moderate</i>	<i>Liberal</i>
Tuition	\$ 350.00	\$ 350.00	\$ 350.00
General Fee	120.00	120.00	120.00
Room-rent	100.00	125.00	175.00
Board	375.00	450.00	500.00
Laundry	25.00	30.00	35.00
Books	30.00	40.00	50.00
Athletic Fee (optional)	10.00	10.00	10.00
<i>Total</i>	<u>\$1,010.00</u>	<u>\$1,125.00</u>	<u>\$1,240.00</u>

Requirements for Admission to the School of Forestry



THE admission requirements of the School of Forestry for work toward the Master of Forestry degree presuppose that an applicant is either:

1. A graduate of a scientific school, college, or university of high standing, but without professional training in forestry, or
2. A graduate of a professional school of forestry, or
3. A student who has successfully completed the pre-forestry curriculum of one of the institutions cooperating with the School of Forestry, as indicated on page 22.

Each applicant must present a certified transcript of his academic record showing the courses he has taken, the number of credit hours he has earned and the grades received. The total number of quality points* must be at least one and one half times the total credit hours to meet the minimum scholastic standards required for admission to the School. An applicant also must have satisfactorily completed undergraduate work in minimum amount, as follows:

One year of biology, including at least one semester of botany, or one year of botany.

One year each of English composition and of chemistry.

One course each in physics and in the principles of economics.

Mathematics, through college algebra and trigonometry.

It is urged that an applicant without professional training in forestry present additional credits in the above subjects and in one or more of the following subjects: soils, geology, mineralogy, petrology, climatology, surveying, languages (particularly German and French), sociology, political science, philosophy, psychology, and zoology.

An applicant who is a graduate of a professional school of forestry will present a certified transcript of scholastic record showing the award of a degree. Before registering for the first semester of residence, such applicants will be required to select the branch or branches of forestry in which they wish to concentrate the major part of their work and to prepare their proposed programs in conference with the appropriate faculty adviser. Ordinarily graduates of a fully accredited

* Grades for each hour of college credit and also, for credit earned in the School of Forestry are valued in quality points as follows: "A," 3 points; "B," 2 points; "C," 1 point; "D," no points; and "F," no credit and —1 point, unless the failed courses have later been passed.

school of forestry should be able to meet all requirements for the Master of Forestry degree in one full school year of resident study; others will require a longer period of residence.

Students must make application for admission in advance of the opening of the school year. Those students entering without acceptable courses in plane surveying, forest-tree identification, forest surveying, and forest mensuration must take the work in these subjects in the Summer Session, and are required to submit their applications prior to May 1. Students entering with advanced standing in all four courses should make application before September 1. Application blanks will be sent upon request made to the Dean of the School of Forestry.

Cooperative Plan of Study with Selected Colleges and Universities



AWARE of the far reaching values to be derived from training in the liberal arts and sciences, the Duke School of Forestry, since its inception, has had the cooperation of Trinity College, the men's undergraduate college of arts and sciences of Duke University, in preparing students for professional careers in forestry. Under the plan a student devotes his first three years to a coordinated and carefully integrated program of study in the basic arts and sciences in Trinity College. The summer between his junior and senior year and the two following school years are spent in the School of Forestry. Upon the successful completion of this five-year course of study, a student has earned the Bachelor of Science degree from Trinity College and the professional Master of Forestry degree from the Duke School of Forestry.

Based upon the experience and success of this cooperative program with Trinity College, the School of Forestry in 1952 initiated similar programs of collaboration with a selected group of colleges and universities located throughout the United States. These programs offer students the numerous advantages of a broad background in liberal arts and sciences as preparation for later professional training. A student intent upon following such a course of study should make application to one of the colleges listed below. Admission requirements and other information pertinent to matriculation may be obtained from each of these institutions. Not later than the end of the first semester of the third year in the college or university of his choice, the student must make formal application for admission to the Duke School of Forestry. To qualify for admission under these programs, a student must have followed a planned course of study arranged in consultation with his advisor, must have the official recommendation of his college, and must meet the minimum requirements for admission to the Duke School of Forestry.

Cooperating Institutions

(as of the date of publication)

Albion College.....	Albion, Michigan
Albright College.....	Reading, Pennsylvania

Baldwin-Wallace College.....	Berea, Ohio
Baylor University, College of Arts and Sciences.....	Waco, Texas
Beloit College.....	Beloit, Wisconsin
Bridgewater College.....	Bridgewater, Virginia
Capital University, College of Arts and Sciences.....	Columbus 9, Ohio
Centenary College of Louisiana.....	Shreveport, Louisiana
Centre College of Kentucky.....	Danville, Kentucky
Colorado College.....	Colorado Springs, Colorado
Davis and Elkins College.....	Elkins, West Virginia
Denison University, A College of Liberal Arts and Sciences.....	Granville, Ohio
DePauw University, College of Liberal Arts.....	Greencastle, Indiana
Doane College.....	Crete, Nebraska
Drew University, College of Liberal Arts.....	Madison, New Jersey
Duke University, Trinity College.....	Durham, North Carolina
Elizabethtown College.....	Elizabethtown, Pennsylvania
Florida Southern College.....	Lakeland, Florida
Franklin and Marshall College.....	Lancaster, Pennsylvania
Furman University.....	Greenville, South Carolina
Gettysburg College.....	Gettysburg, Pennsylvania
Guilford College.....	Guilford College, North Carolina
Heidelberg College.....	Tiffin, Ohio
High Point College.....	High Point, North Carolina
Hofstra College.....	Hempstead, Long Island, New York
Howard College.....	Birmingham 6, Alabama
Illinois Wesleyan University, College of Liberal Arts....	Bloomington, Illinois
Juniata College.....	Huntingdon, Pennsylvania
Kent State University, College of Liberal Arts.....	Kent, Ohio
Lebanon Valley College.....	Annville, Pennsylvania
Lycoming College.....	Williamsport, Pennsylvania
Marietta College.....	Marietta, Ohio
Miami University, College of Arts and Sciences.....	Oxford, Ohio
Middlebury College.....	Middlebury, Vermont
Millsaps College.....	Jackson, Mississippi
Moravian College.....	Bethlehem, Pennsylvania
Muhlenberg College.....	Allentown, Pennsylvania
Newberry College.....	Newberry, South Carolina
Otterbein College.....	Westerville, Ohio
Randolph-Macon College.....	Ashland, Virginia
Reed College.....	Portland 2, Oregon
Rollins College.....	Winter Park, Florida
Stetson University, College of Liberal Arts.....	DeLand, Florida
Thiel College.....	Greenville, Pennsylvania
University of Kentucky, College of Arts and Sciences.....	Lexington, Kentucky
University of Richmond, Richmond College.....	Richmond, Virginia
West Virginia Wesleyan College.....	Buckhannon, West Virginia
Willamette University, College of Liberal Arts.....	Salem, Oregon
William and Mary, College of.....	Williamsburg, Virginia
William Jewell College.....	Liberty, Missouri
Wittenberg College.....	Springfield, Ohio
Wofford College.....	Spartanburg, South Carolina

Requirements for the Degree of Master of Forestry



THE degree of Master of Forestry (M.F.) is conferred upon students who have satisfactorily completed at least two years of study in technical forestry and one term of thirteen weeks' work in plane surveying, forest-tree identification, forest surveying, and forest mensuration in the Summer Session. In addition to the Summer Session work a total of not less than sixty semester hours' credit is required for the M.F. degree, of which at least fifty shall have been obtained in the School of Forestry. Each student, to qualify for the M.F. degree, must have obtained at least one and one half quality points per semester hour of credit under the quality-point system (see page 20).

Field studies of typical timber-harvesting, manufacturing, and other utilization operations in the South Atlantic Coastal Plain are conducted from the School's field headquarters during a two-week period in the spring semester as part of the work required of students registered in Harvesting and Processing Forest Products (Forestry 211-212). Other students may be permitted or advised to take the field trip for which one semester hour of credit may be earned by registering for Forestry 212. A similar period of field work in forest soils, silviculture, forest management, and other subjects in the coastal plain is available to students.

No student may take less than fourteen or more than eighteen hours in any one semester without special permission of the School of Forestry Faculty. The following work will be required of all candidates for the M.F. degree:

SUMMER SESSION

	S.H.
Plane Surveying (C.E. S110).....	4
Forest-Tree Identification (F. S149).....	1
Forest Surveying (F. S150).....	4
Forest Mensuration (F. S151).....	4

FIRST YEAR

First Semester

	S.H.
Harvesting and Processing Forest Products (F. 211).....	3
Properties of Wood (F. 259).....	3
Forest Soils (F. 261).....	3
Economics of Forestry (F. 277).....	3
Electives	3

Second Semester

	S.H.
Harvesting and Processing Forest Products Field Trip (F. 212).....	1
Forest Pathology (F. 224).....	3
Sampling Methods (F. 251).....	3
Dendrology (F. 254).....	3
Silvics (F. 264).....	3
Electives	2

SECOND YEAR

Two curricula in forestry are available after the common minimum requirements for both have been met. One is in general forestry; the other in forest products. The required work in each curriculum, in addition to that common to both, is:

GENERAL FORESTRY CURRICULUM

*First Semester**Second Semester*

	S.H.		S.H.
Forest Entomology (F. 231).....	3	Soils and Silviculture Spring	
Silviculture (F. 265).....	3	Trip (F. 266).....	1
Applied Silviculture (F. 267).....	1	Forest Protection (F. 274).....	2
Forest Valuation (F. 279).....	3	Advanced Forest Management (F. 342)	10
Forest Management (F. 281).....	3	Thesis research or electives.....	10
Thesis research or electives.....	2		

FOREST PRODUCTS CURRICULUM

*First Semester**Second Semester*

	S.H.		S.H.
Seasoning and Preservation (F. 213)..<	3	Forest Products Entomology (F. 232)..<	3
Silviculture (F. 265)	3	Wood Anatomy (F. 260).....	3
Forest Management (F. 281).....	3	Industrial Engineering (Eng. 158)....	3
Advanced Forest Utilization (F. 311)..<	3	Thesis research or electives.....	6
Thesis research or electives.....	3		

The submission of a thesis for the M.F. degree is optional. In lieu of a thesis, and with the approval of a student's faculty adviser, an acceptable report on a special study will be required, credit for which will not exceed three semester hours.

Each candidate who writes a thesis will be required to file in the office of the Dean of the School of Forestry on or before May 15 three copies of the thesis, typewritten and bound in accordance with regulations set forth by the Faculty. The thesis shall be based upon an original study made in the field, laboratory, or library.

Work of equivalent grade done in residence at other institutions may, with the approval of the Faculty, be accepted as credit toward the M.F. degree. A minimum of one year's residence is required at Duke University. Students who have had satisfactory undergraduate training in forestry may, with the approval of the Faculty, elect to devote the major portion of their time to research under the supervision of one or more members of the Faculty and prepare a more comprehensive thesis than is required of students entering the School without previous work in forestry. Students in the School of Forestry may take in allied departments of the University as electives certain courses approved by the Faculty.

Requirements for the Degree of Doctor of Forestry



THE degree Doctor of Forestry (D.F.) is a professional and research degree conferred on those students who have satisfactorily completed specified requirements of advanced study and research. Although course work is a necessary part of a student's program, the mere accumulation of course credits will not be sufficient for the attainment of this degree. The granting of the D.F. degree is based primarily upon the student's thorough knowledge of a specialized field of study and upon the production of an acceptable dissertation embodying the results of original research. The general requirements, which are presented in the following paragraphs, ordinarily will be rigidly adhered to, although deviations in exceptional cases may be made with the approval of the Faculty of the School of Forestry.

The D.F. degree is offered with majors (also minors) in the following branches of forestry: forest economics, forest entomology, forest management, forest mensuration, forest pathology, forest soils, forest-tree physiology, forest utilization, silvics, silviculture, and wood and forest products technology.

Prospective students should correspond with the Dean of the School of Forestry on all matters pertaining to admission to the School.

ENTRANCE REQUIREMENTS: A prospective student must have received the degree of Master of Forestry, or its equivalent, from a school of forestry of recognized standing. His scholastic average for his undergraduate work must be at least $1\frac{1}{2}$ quality points, and that of his graduate studies two quality points per hour of credit.

An applicant must file a formal application for admission together with transcripts of his undergraduate and graduate academic records. In his application he should clearly state the branch of forestry in which he desires to concentrate, and if possible, the specific research.

The Committee on Admissions of the School of Forestry, together with the prospective student's major adviser, will determine if the qualifications of the applicant meet entrance requirements.

RESIDENCE REQUIREMENTS: The period of resident study beyond the M.F. degree or its equivalent is two years. Course work of equal grade taken at another college or university may, with Faculty approval, be accepted in partial fulfillment of the residence re-

quirement, but the last year of residence must be at Duke University. With the approval of the Faculty, one year of resident credit may be granted for work taken in the regular terms of the Summer Session of Duke University. Graduate work of a fragmentary nature taken over a period of several years will not meet the residence requirement.

PROGRAM OF STUDY: A committee consisting of five members of the Faculty will be appointed by the Dean to supervise the work of each student. This committee shall consist of a major adviser, a minor adviser and three other Faculty members. The major adviser will serve as Committee Chairman.

If the student's previous training is inadequate, he will be required to remedy such deficiencies as may be directed by his committee. The student, in consultation with his advisers, will prepare a program of study and research. The proposed program will be presented to the committee for consideration and acceptance, and then submitted to the Faculty of the School of Forestry for final approval. The minor requirement may be fulfilled by advanced course work or course work and research. Requirements for the minor will be established by the Faculty member in charge of the field. The minor may be taken in the School of Forestry, or in another department, school, or college in the University.

A grade point average of at least two quality points per credit hour is required of all work toward the doctorate.

FOREIGN LANGUAGES: A reading knowledge of two foreign languages is required. One of these shall be either French or German; the other will be selected by the committee with the view toward determining the student's needs. The foreign language examinations will be conducted by the appropriate language departments or, for certain languages, by a qualified member of the Faculty of Duke University.

PRELIMINARY EXAMINATION: At least six months before the student expects to receive the D.F. degree, and after he has completed the foreign language requirement and most of his formal course work, he will be required to take a comprehensive preliminary examination. The examination will be written in subjects specified, and may be followed by an oral examination given by the committee. The decision as to whether the examination has been passed or failed is the responsibility of the committee.

Should the student fail the preliminary examination he may apply for a second examination to be taken not earlier than six months after the first. Failure in the second examination renders the student ineligible to continue work for the D.F. degree at Duke University.

Upon satisfactory completion of the preliminary examination the student shall be considered a candidate for the D.F. degree.

DISSERTATION: In addition to obtaining adequate training in the field of his specialty, the student must demonstrate his ability to plan and conduct sound, original research. Evidence of this accomplishment must be presented in the form of an acceptable dissertation embodying the results of original work, which is a definite contribution to knowledge.

The subject of the dissertation must receive the approval of the Faculty, and the title filed with the Dean of the School of Forestry on or before October 15 of the academic year in which the candidate desires to take his final examination.

Four typewritten copies of the dissertation in approved form, must be deposited with the Dean of the School of Forestry on or before April 15 of the academic year in which the student expects to obtain the D.F. degree. The original and first carbon copy will be deposited in the University Library, the major adviser will receive one copy, and the fourth copy will be returned to the student.

The dissertation must be published either in its original form or in a modified form approved by the major adviser. In its published form the title page should include this statement: "A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Forestry in the School of Forestry of Duke University." In some instances an abstract, published in a recognized journal, will be considered as meeting the publication requirement.

The candidate must deposit a fee of \$50.00 with the Treasurer of the University on or before May 1 of the year the degree is to be conferred. If the dissertation is published in acceptable form within three years from the time the degree is granted, the deposit will be returned to the student upon receipt of 10 reprinted copies of the publication.

FINAL EXAMINATION: The final examination will be in defense of the candidate's dissertation and on related subject matter. It will be oral and will be conducted by the supervisory committee. At least six months must elapse between the dates of the preliminary and the final examinations.

Forestry in the Graduate School



MAJOR and minor work is offered in the scientific aspects of forestry leading the A.M. and Ph.D. degrees, which are administered by the Graduate School of Arts and Sciences. Work for these degrees may be pursued only in forest-tree physiology, wood anatomy and properties, forest pathology, silvics, forest soils, forest mensuration, forest entomology, and forest economics. Students who have had specialized training in botany or soil science and in allied basic subjects, such as physics, chemistry, geology, and zoology, may pursue graduate study and research only in the specialized fields for which their previous work has qualified them. Students who do not have previous training in forestry will be required to complete a minimum of thirty semester hours of approved work in forestry as a preliminary requirement to advanced study for the A.M. and Ph.D. degrees. Holders of these degrees will not be regarded as professionally trained foresters.

Applicants for admission to the Graduate School must ordinarily have made, in their undergraduate work, not less than a "B" average and must not have concentrated excessively in one field of study to the detriment of a rounded program. They should have met substantially the requirements for the A.B. or B.S. degree at Duke University.

In addition to fulfilling the usual requirements for admission, the applicant must satisfy the Director of Graduate Studies in Forestry as to his liberal arts training, as well as to his preliminary training in the field of forestry.

For detailed information concerning admission to the Graduate School, and for regulations governing candidacy for the A.M. and Ph.D. degrees, language requirements, residence requirements, and other regulations concerning these degrees, the student should consult the *Bulletin* of the Graduate School of Arts and Sciences.

Courses and Subjects of Instruction



With the exception of the Summer Session courses, odd-numbered courses are offered in the autumn semester, and even-numbered courses are offered in the spring semester.

IN THE SUMMER SESSION

C.E. S110. PLANE SURVEYING.—A special section of C.E. 61 intended for students in forestry and others of advanced standing. *Four weeks, eight hours a day, beginning June 10, 1954.* 4 s.h. MR. THARP

S149. FOREST-TREE IDENTIFICATION.—Field studies leading to the identification of trees and principal shrubs indigenous to the Piedmont and coastal plain forests of the Southeastern United States. *One, week, eight hours a day, beginning July 8, 1954.* 1 s.h. (w) PROFESSOR HARRAR

S150. FOREST SURVEYING.—Application of plane surveying to forest problems; practice in making boundary and topographic surveys of forested tracts, using both intensive and extensive methods. Work includes use of transit, level, traverse board, topographic abney and slope tape, and aneroid barometer. Prerequisites: Civil Engineering S110, plane surveying, Forestry S149, forest-tree identification or equivalents. *Four weeks, eight hours a day, beginning July 15, 1954.* 4 s.h. (w) ASSOCIATE PROFESSOR CHAIKEN

S151. FOREST MENSURATION.—Field studies in methods of measuring content and growth of trees and forest stands; practice in timber estimating, log scaling, use of mensurational instruments, and collection of basic data. *Four weeks, eight hours a day, beginning August 12, 1954.* 4 s.h. (w) PROFESSOR SCHUMACHER

FOR SENIORS AND GRADUATES

211-212. HARVESTING AND PROCESSING FOREST PRODUCTS AND FIELD TRIP.—Methods of harvesting and processing forest products with emphasis on methods and costs in managed North American forests. A two-week field trip (F. 212), during which typical forest harvesting operations and processing plants are studied, is required of students taking Forestry 211. The field trip (F. 212) may be taken by other students having had work equivalent to Forestry 211. F. 211—3 s.h.; F. 212—1 s.h. (w) PROFESSOR WACKERMAN

213. SEASONING AND PRESERVATION OF WOOD.—Principles of seasoning lumber and other forest products by air drying and kiln drying, types of kilns and their operation; principles, methods, and materials used in treating wood to increase its durability. 3 s.h. (w) PROFESSOR WACKERMAN

214. MARKETING FOREST PRODUCTS.—Methods of selling and distributing timber, lumber, and other forest products in domestic and foreign trade; transportation methods; promotional activities of trade associations; competition between producing regions for markets and problems arising from the development of wood substitutes. Prerequisites: Forestry 211-212 or equivalent. 3 s.h. (w) PROFESSOR WACKERMAN

216. LUMBER MANUFACTURING.—Methods of processing logs for sawn products with emphasis on the principles involved in obtaining maximum volume and quality yield for large and small mills and concentration yards; trends in production and consumption of lumber by regions and the development of new lumber products. 3 s.h. (w) PROFESSOR WACKERMAN

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1 and 2, or equivalents. 3 or 4 s.h. (w) PROFESSOR WOLF

231. **FOREST ENTOMOLOGY.**—Principles of protecting forests from insect attack; character of insect damage to forest trees and their products; identification and biology of important species; survey methods and control. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

232. **FOREST-PRODUCTS ENTOMOLOGY.**—Recognition of insect damage to wood products; etiology, biology and control of important species. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

236. **FOREST-GAME MANAGEMENT.**—Principles of management for the sustained production of desirable game and fur animals on forest lands; characteristics and biology of important species. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

237. **FOREST-RANGE MANAGEMENT.**—Principles of management of livestock grazing on forest ranges on the basis of sustained multiple use. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

251. **SAMPLING METHODS IN FORESTRY.**—Statistical background for solution of sampling problems with special reference to sample inventory of a forest property. Offered both semesters. Prerequisite: Forestry SI51. 3 s.h. (w)

PROFESSOR SCHUMACHER

252. **FOREST MENSURATION.**—Empirical equations and curve fitting appropriate for construction of timber yield tables, tree volume and taper tables; significance tests and graphical solution of equations. Assignments require operation of calculating machines. Prerequisite: Forestry 251. 3 s.h. (w)

PROFESSOR SCHUMACHER

254. **DENDROLOGY.**—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of biology. 3 s.h. (w)

PROFESSOR HARRAR

255. **BONDING OF WOOD.**—Preparation of veneers and lumber for bonding; types and characteristics of modern adhesives used in the manufacture of plywood and laminates; cold and hot pressing procedures; use of electronic heating; bag molding techniques; manufacture and properties of transmuted wood; inspection and testing procedures. Prerequisite: Forestry 260 or equivalent. 3 s.h. (w)

PROFESSOR HARRAR

257. **DESIGN OF FORESTRY EXPERIMENTS AND ANALYSIS OF DATA.**—Role of experimental design in field and laboratory, and statistical analysis of data as aspects of scientific methods in forest research. 5 s.h. (w)

PROFESSOR SCHUMACHER

259. **PROPERTIES OF WOOD.**—The chemical nature of wood substance and its industrial chemical derivatives. Wood-moisture relationships; pertinent non-mechanical physical properties; mechanical properties and factors affecting the strength of wood; standard timber testing procedures. Uses of woods as determined by their properties. Prerequisites: one year of college chemistry; one course in college physics. 3 s.h. (w)

PROFESSOR HARRAR

260. **WOOD ANATOMY.**—Study of the physical features and the gross and minute structural characteristics of wood leading to the identification of the commercial woods of the United States, and the important tropical woods used in American wood-working industries. Elementary microtechnique. Prerequisite: one year of biology. 3 s.h. (w)

PROFESSOR HARRAR

261. **FOREST SOILS.**—Origin, development, and classification of soils with special emphasis on those developed in humid climates; morphological, physical, and chemical properties of soils in relation to growth of trees; effect of forests on soils. Prerequisites: Chemistry 1 and 2, and Physics 1, or equivalent; physical geology, mineralogy, petrology, and analytical chemistry are also desirable. 3 s.h. (w)

ASSISTANT PROFESSOR RALSTON

264. **SILVICS.**—Ecological foundations of silviculture with special reference to forest site factors; influence of forests on their environment; growth and development of trees and stands; origin, development, and classification of forest communities; methods of studying forest environments. Desirable prerequisites: plant physiology, plant ecology, and Forestry 261, or equivalents. 3 s.h. (w)

PROFESSOR KORSTIAN

265. **THEORY AND PRACTICE OF SILVICULTURE.**—Principles governing natural regeneration and treatment of forest stands and their application; reproduction methods, intermediate cuttings, and cultural operations. Field practice includes marking for various kinds of cuttings, cultural treatments, and study of managed stands in the Duke Forest. Prerequisite: Forestry 264 or equivalent. 3 s.h. (w)

PROFESSOR KORSTIAN

266. **SOILS AND SILVICULTURE SPRING TRIP.**—Approximately one week at spring camp studying soils and silviculture in the coastal plain. Prerequisites: Forestry 261, 265 or equivalents. 1 s.h.

ASSISTANT PROFESSOR RALSTON

267. **APPLIED SILVICULTURE.**—Application and comparison of silvicultural practices to principal commercial forest species, types and regions of temperate North America, with particular emphasis on the South. Field work will include preparation of silvicultural plans. Prerequisite: Forestry 265 or equivalent. 1 s.h. (w)

PROFESSOR KORSTIAN

268. **FOREST SEEDING AND PLANTING.**—Place of artificial regeneration in practice of forestry; reforestation surveys and plans; collection, extraction, cleaning, testing and storage of forest tree seeds; direct seeding; nursery practice; forest planting. 2 s.h. (w)

PROFESSOR KORSTIAN

274. **FOREST PROTECTION.**—Principles of forest protection; causes, character and effects of forest fires; principles of forest fire prevention, suppression and suppression; fire control costs and fire plans; protection against domestic animals, wildlife, and atmospheric agencies. 2 s.h. (w)

ASSOCIATE PROFESSOR CHAIKEN

276. **FORESTRY POLICY.**—Objective study and analysis of the development of public land and forestry policies in the United States, present policies of public and private forestry organizations, and current policy issues in the light of economic and other criteria. Prerequisites: Forestry 279, 281. 2 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

277. **ECONOMICS OF FORESTRY.**—Principles of economics used in the analysis of factors affecting the supply of forest products, pricing of stumpage and primary forest products, factors affecting the demand for forest products, economic characteristics and problems of the major forest products industries; analysis of such specific private forestry problems as marketing, forest ownership pattern, taxation, credit, risk, and economic fluctuations. Prerequisite: at least one course in the principles of economics. 3 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

279. **FOREST VALUATION.**—Principles of economics applied to the appraisal of land values and management alternatives; theory and application of interest and the discount process; marginal analysis applied to the specific problems of firms engaged in forestry. Prerequisite: Forestry 277 or consent of the instructor. 3 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

281. **FOREST MANAGEMENT.**—Principles of organizing forest properties for systematic management; use of data obtained in surveys and inventories; principles of forest regulation, including a study of normal and actual forests, rotations, cutting cycles, and methods of regulating the cut in even-aged and all-aged forests for sustained yield; introduction to the preparation of preliminary forest management plans. Prerequisites: Forestry S150, S151, or equivalents 3 s.h. (w)

ASSOCIATE PROFESSOR CHAIKEN

211A. TO 282A. **SPECIAL STUDIES IN FORESTRY.**—Work on the same level as the foregoing Senior-Graduate courses to meet the needs of individual students. Credits and hours to be arranged.

THE STAFF

FOR GRADUATES

301-302. ADVANCED STUDIES IN FORESTRY.—Credits to be arranged. To meet individual needs of graduate students in the following branches of forestry:

A. SILVICS.—Prerequisites: Forestry 254, 261, and 264 or equivalents.

PROFESSOR KORSTIAN

B. FOREST SOILS.—Prerequisite: Forestry 261 or equivalent.

ASSISTANT PROFESSOR RALSTON

C. SILVICULTURE.—Prerequisites: Forestry 265, 266 and 267 or equivalents.

PROFESSOR KORSTIAN

D. FOREST MANAGEMENT.—Prerequisite: Forestry 281 or equivalent.

ASSOCIATE PROFESSOR CHAIKEN

E. FOREST ECONOMICS.—Prerequisite: Forestry 277 or equivalent.

ASSISTANT PROFESSOR STOLTENBERG

F. PROPERTIES OF WOOD.—Prerequisites: Forestry 259 and 260, or equivalents.

PROFESSOR HARRAR

G. FOREST MENSURATION.—Prerequisite: Forestry 252, or equivalent.

PROFESSOR SCHUMACHER

H. FOREST ENTOMOLOGY.—Prerequisites: Forestry 231, 232 or equivalents.

ASSOCIATE PROFESSOR ANDERSON

I. FOREST UTILIZATION.—Prerequisite: Forestry 211-212 or equivalent.

PROFESSOR WACKERMAN

J. DENDROLOGY.—Prerequisite: Forestry 254 or equivalent. PROFESSOR HARRAR

311. ADVANCED FOREST UTILIZATION.—Analysis of the principles of determining the cost of and return from harvesting and manufacturing timber for various products and other uses of forests; study of factors governing the relation of tree size to net stumpage values; and the application of these principles and methods in the solution of actual case problems. Prerequisites: Forestry 211-212 or equivalent. 3 s.h. (w)

PROFESSOR WACKERMAN

320. SEMINAR IN SILVICULTURE.—Arranged primarily to give graduates of other schools of forestry special training in the silviculture of the forests of the South. All men taking this course should also register for Forestry 266. Prerequisite: At least one course in silviculture. 3 s.h. (w)

PROFESSOR KORSTIAN

322. SOIL CLASSIFICATION AND MAPPING.—Classification of soils as natural bodies. Mapping of soils, land use classes and forest site classes. Ordinarily one week of field study will be made of soils in either the coastal plain or mountains. Prerequisites: Forestry 261. 2 s.h. (w)

ASSISTANT PROFESSOR RALSTON

323-324. ADVANCED FOREST PATHOLOGY.—Advanced study and research on life histories and control of diseases of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and forest pathology. Credits to be arranged.

PROFESSOR WOLF

326. ADVANCED FOREST SOILS.—Interrelations of the physical, chemical, and biological characteristics of forest and range soils. Prerequisites: analytical chemistry and Forestry 261. 3 s.h. (w)

ASSISTANT PROFESSOR RALSTON

342. ADVANCED FOREST MANAGEMENT.—Examination and analysis of techniques employed in the management of industrial and public forests, particularly in the South; discussion of problems of large scale intensive forest management. One week is spent in field study in the South Atlantic Coastal Plain. Prerequisites: Forestry 267, 279, and 281 or equivalents. 2 s.h. (w)

ASSOCIATE PROFESSOR CHAIKEN

351-352. ADVANCED PHYSIOLOGY OF FOREST TREES.—Advanced study and research on problems in physiology of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and plant ecology and silvics. Credits to be arranged.

PROFESSOR KRAMER

356. SEMINAR IN FOREST ECONOMICS.—Examination and discussion of the application of economic concepts in forestry, the potential contribution of economic analysis to private and public forest management; current research in forest economics. Prerequisites: Forestry 277 and 279 or consent of the instructor; advanced courses in economics and economic theory are desirable. 2 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

357-358. RESEARCH IN FORESTRY.—Credits to be arranged. Students who have had adequate training may do research under direction of members of the Faculty in the branches of forestry indicated under courses 301-302 with the same prerequisites as thereunder noted. Each branch to bear the same letter designation as under Courses 301-302.

Enrollment 1953-1954



- * Bilan, Mykita Victor (University of Lemberg; Diploma in Forestry, University of Munich), Durham, N. C.
- † Briscoe, Charles Buford (B.S., Louisiana State University), Harlingen, Texas
- * Connolly, Francis Thomas (B.S., Rutgers University), Plainfield, N. J.
- * Crockett, Joseph McGavock (B.S., Virginia Polytechnic Institute), Wytheville, Va.
- * Davis, Francis Guy (B.S., Virginia Polytechnic Institute), Richmond, Va.
- * Gross, Don Frederick (B.S., Roanoke College), Vinton, Va.
- † Hocker, Harold Willetts, Jr. (B.S., Pennsylvania State College; M.F., N. C. State College), Harrisburg, Pa.
- * Holdren, Richard Kenmore (B.S., Pennsylvania State College), Lebanon, Pa.
- * Hypes, Warren Dunning (B.S.F., West Virginia University), Bluefield, W. Va.
- † Jeffries, Andrew Ray (B.S., Virginia Polytechnic Institute), Bluefield, Va.
- * Kelly, Gilbert Loyd (B.S., Louisiana Polytechnic Institute), Grayson, La.
- † Lorio, Peter Leonce, Jr. (B.S., Louisiana State University), New Orleans, La.
- † Lynch, Donald Walton (B.S.F., Montana State University; M.F., Duke University), Spokane, Wash.
- * McWilliam, James Russell (B.Sc. For., University of Queensland; Diploma in Forestry, Australian Forestry School), Toowoomba, Queensland, Australia
- * Martin, Charles Edward II (B.S., Duke University), Oxford, Pa.
- * Merck, Harry Lamar (B.S.F., West Virginia University), Huntington, W. Va.
- † Moynla, Oleksa (Dip. Eng.-Forester, Ukrainian Technical Husbandry Institute), Newark, N. J.
- † Olinger, Harold Lawson (B.S., Franklin and Marshall College), Kutztown, Pa.
- † Ritter, Marion Whitney (B.S., Clemson Agricultural College), Hickory, N. C.
- * Rumpf, Robert Henry (B.S., Pennsylvania State College), Fayetteville, Pa.
- * Stillwell, Harold Daniel (B.S., Duke University), Durham, N. C.
- * Turner, Ralph Gray (B.S., University of Richmond), Richmond, Va.
- † Wach, Thaddeus Francis (B.S., Virginia Polytechnic Institute), South Hadley Falls, Mass.
- * West, James Edgar (B.S., University of Massachusetts), Dorchester, Mass.
- † White, Fred Myerle III (B.S., University of the South), Memphis, Tenn.
- * Whitesell, Craig Darius (B.S.F., West Virginia University), Solomons, Md.
- * Womack, Bobby Lewis (B.S.F., University of Georgia), Doraville, Ga.
- † Worst, Raymond Henry (B.S., Virginia Polytechnic Institute), Hampton, Va.
- * Zimmerman, James Dillard (A.B., Lynchburg College), Boydton, Va.

Students in Summer Session Only, 1953

- † Aubach, John J. (B.S.F., University of Michigan; M.F., University of Michigan), Blackburg, Va.
- Bailey, Harry B., Jr. (B.S.F., University of Georgia), Swainsboro, Ga.
- Cantrell, Jack O. (B.S.F., West Virginia University), Swainsboro, Ga.
- Deloatch, Sidney C., Jr. (Duke University), Roanoke Rapids, N. C.
- Duzan, Howard W., Gann Valley, S. D.
- Fisher, Clifford V. (B.S.F., West Virginia University), Brunswick, Ga.
- Goforth, Marcus H. (Duke University), Concord, N. C.
- † Griffin, Ralph II. (B.S., Virginia Polytechnic Institute; M.F., Yale University), Greensboro, N. C.
- Heestand, Robert L. (Heidelberg College), Navarre, Ohio
- † Herndon, Thomas G. (B.S.F., University of Florida; M.S.F., University of Florida), Gainesville, Fla.
- Hudson, Marks D. (Duke University), Jacksonville, N. C.
- Kalmar, Lewis F. (B.S.F., West Virginia University), Jasper, Fla.
- McDough, Lawrence A. (B.S.F., University of Georgia), Savannah, Ga.
- Muller, Paul M. (Iowa State College), Savannah, Ga.
- Schmitt, Richard H. (B.S.F., Michigan State College), Brunswick, Ga.
- Williams, Ellis T. (B.A., Yale University; M.B.A., Harvard Graduate School of Business Administration), Washington, D. C.

Special Students

- Troxell, Harry Emerson, Jr. (B.S., Duke University; M.F., Duke University), Fort Collins, Colo.

Ventura, Armando (Eng. Agr., Universidade de Sao Paulo), Sao Paulo, Brazil

* Registered for Master of Forestry Degree, 1954.

† Registered for Master of Forestry Degree, 1955.

‡ Registered for Doctor of Forestry Degree.

Academic-Forestry Seniors in the School of Forestry

Garber, Meyer, Atlanta, Ga.
 Max, William E., Massapequa, N. Y.
 McRoy, William D., Jr., Hillsboro, N. C.
 Whitaker, Harold F., Durham, N. C.

Institutions Represented

Australian Forestry School	1	Ukrainian Technical Husbandry Institute	1
Clemson Agricultural College	1	Universidade de Sao Paulo	1
Duke University	11	University of Florida	1
Franklin and Marshall College	1	University of Georgia	3
Harvard Graduate School of Bus. Adm.	1	University of Lemberg	1
Heidelberg College	1	University of Massachusetts	1
Iowa State College	1	University of Michigan	1
Louisiana Polytechnic Institute	1	University of Munich	1
Louisiana State University	2	University of Queensland	1
Lynchburg College	1	University of Richmond	1
Michigan State College	1	University of the South	1
Montana State University	1	Virginia Polytechnic Institute	6
North Carolina State College	1	West Virginia University	6
Pennsylvania State College	3	Yale University	2
Roanoke College	1	<i>Total Institutions</i>	30
Rutgers University	1		

Geographical Distribution

UNITED STATES			
Colorado	1	Ohio	1
District of Columbia	1	Pennsylvania	5
Florida	2	South Dakota	1
Georgia	8	Tennessee	1
Louisiana	2	Texas	1
Maryland	1	Virginia	8
Massachusetts	2	Washington	1
New Jersey	2	West Virginia	2
New York	1	<i>Total States</i>	18
North Carolina	9		
FOREIGN COUNTRIES			
Australia	1	Brazil	1
		<i>Total</i>	2

General Summary

Students in the School of Forestry	29
Students in the Summer Session Only	16
Special Students	2
Academic-Forestry Seniors in the School of Forestry	4
<i>Total Enrollment</i>	51
Total number of institutions represented	30
Total number of states represented	18
Total number of foreign countries represented	2

BULLETIN OF DUKE UNIVERSITY



The Summer Session 1954

First Term: June 9 to July 17

Second Term: July 20 to August 27

VOLUME 26

February, 1954

NUMBER 4

Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

For BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

For BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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BULLETIN
OF
DUKE UNIVERSITY



The Summer Session 1954

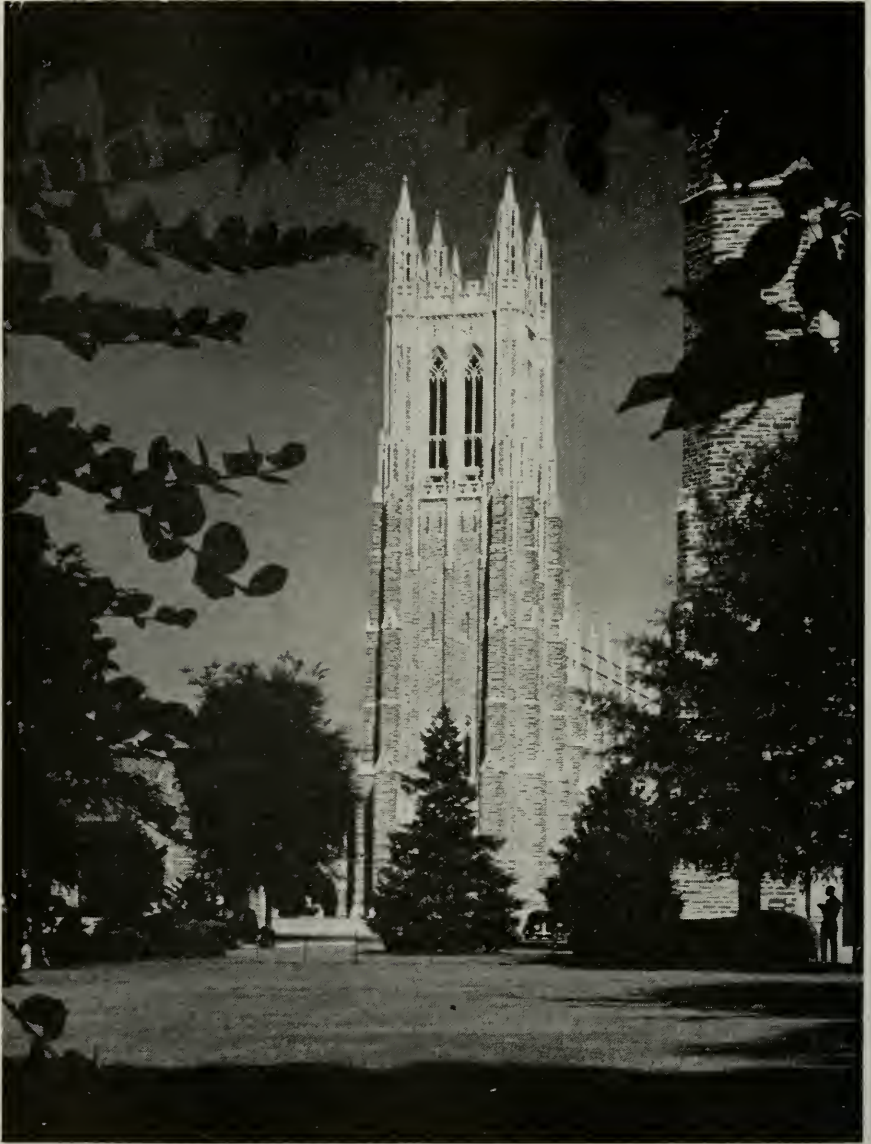
ANNOUNCEMENTS

First Term: June 9 to July 17

Second Term: July 20 to August 27

DURHAM, NORTH CAROLINA

1954



THE CHAPEL AT DUKE UNIVERSITY

Calendar of the Summer Session

1954



MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10	11	12	13	14	15	16	17
9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17	18	19	20	21	22	23	24
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24	25	26	27	28	29	30	31
23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31	29	30	31				
30	31																										

June 8-11, Tuesday-Friday

Christian Convocation of 1954.

June 8, Tuesday, 9:00 a.m.

Dormitory rooms ready for occupancy.

June 9, Wednesday

Registration for First Term.

June 10, Thursday

Instruction begins in all 6-week courses of the First Term.

June 12, Saturday

All classes meet. Not a holiday.

June 15, Tuesday

Instruction begins in Physics S51.

June 15-17, Tuesday-Thursday

Regional Conference on School Law.

June 22, Tuesday

Instruction begins in all 4-week courses of the First Term in Chemistry, Geology, and Zoology.

July 8, Thursday

Final date for filing with the Dean of the Graduate School statement of intention to complete Master's degree requirements during the First Term, and for filing title of Master's thesis.

July 9, Friday

Graduate reading examinations in Romance Languages. Applicants for these examinations must register in the Graduate School Office not later than July 1.

July 16-17, Friday-Saturday

Final Examinations for the First Term.

July 19-23, Monday-Friday

Laboratory Conference for Teachers of Science and Mathematics.

July 20-August 6, Tuesday-Friday

School for Approved Supply Pastors.

July 20, Tuesday

Registration for the Second Term.

July 21, Wednesday

Instruction begins in all Second Term courses.

July 24, Saturday

All classes meet. Not a holiday.

July 26, Monday

Final date for filing with the Dean of the Graduate School statement of intention to complete Master's degree requirements during the Second Term, and for filing title of Master's thesis.

August 14, Saturday

Final Examinations in all 4-week courses of the Second Term in Chemistry, Geology, and Zoology.

August 16-20, Monday-Friday

Conference of the Youth Council of the Methodist Youth Fellowship.

August 20, Friday

Final Examinations in Physics S52.

August 21-27, Saturday-Friday

Conference of the School of Missions Committee of the Woman's Society of Christian Service of the North Carolina Conference of the Methodist Church.

August 26-27, Thursday-Friday

Final Examinations in all 6-week courses in the Second Term.

September 6-16, Monday-Thursday

Special course in Solid Geometry.

Table of Contents



Administrative Officers.....	5
The Summer Session Faculty.....	7
Function of the Summer Session.....	10
Admission	11
Financial Information, Living Accommodations, and Medical Care	13
Registration	18
Academic Regulations	22
University Services, Publications, and Student Activities.....	26
Resources of the University.....	28
Special Conferences and Courses.....	29
The Graduate School of Arts and Sciences.....	32
School of Nursing	39
Divinity School Studies.....	39
Undergraduate Study	39
Courses of Instruction.....	41

Administrative Officers of the Summer Session



ARTHUR HOLLIS EDENS, Ph.D., LL.D.
President of Duke University

PAUL MAGNUS GROSS, Ph.D.
Vice-President in the Division of Education

CHARLES EDWARD JORDAN, A.B., LL.D.
Vice-President in the Division of Public Relations

HERBERT JAMES HERRING, A.M., LL.D.
Vice-President in the Division of Student Life

ALFRED SMITH BROWER, A.B.
Business Manager and Comptroller

CHARLES BLACKWELL MARKHAM, A.M.
Treasurer of the University

PAUL HIBBERT CLYDE, Ph.D.
Director of the Summer Session



ROBERTA FLORENCE BRINKLEY, Ph.D.
Dean of the Woman's College

JAMES CANNON, Th.M., D.D.
Dean of the Divinity School

HERBERT JAMES HERRING, A.M., LL.D.
Dean of Trinity College

CLARENCE FERDINAND KORSTIAN, Ph.D.
Dean of the School of Forestry

ALAN KREBS MANCHESTER, Ph.D.
Dean of Undergraduate Studies

WALTER JAMES SEELEY, M.S.
Dean of the College of Engineering

CHARLES SACKETT SYDNOR, Ph.D., Litt.D., LL.D.
Dean of the Graduate School of Arts and Sciences

FLORENCE K. WILSON, A.B., R.N., M.A.
Dean of the School of Nursing



WILLIAM COUNCILL ARCHIE, Ph.D.
Associate Dean of Trinity College

CAZLYN GREEN BOOKHOUT, Ph.D.
Director of the Duke Marine Laboratory

DUKE UNIVERSITY

ROBERT B. COX, A.M.

Dean of Undergraduate Men

GIFFORD DAVIS, Ph.D.

Director of the School of Spanish Studies

ELLEN HARRIS HUCKABEE, A.M.

Dean of Undergraduate Instruction, The Woman's College

MARIANNA DUNCAN JENKINS, Ph.D.

Associate Dean of Undergraduate Instruction, The Woman's College

CHARLES BUCHANAN JOHNSON, A.M.

Assistant to the Director, The Summer Session

MRS. ELIZABETH ANDERSON PERSONS, A.M.

Director of Admissions, The Woman's College

OLAN LEE PETTY, Ph.D.

Assistant Director, The Summer Session

CHARLES EUGENE WARD, Ph.D.

Director of Admissions, Graduate School of Arts and Sciences

EVERETT BROADUS WEATHERSPOON, A.B.

*Director of Admissions, Trinity College and the
College of Engineering*

MARY GRACE WILSON, A.M.

Dean of Undergraduate Women

The Summer Session Faculty



- AMOR Y VÁZQUEZ, JOSÉ, M.A.
Visiting Instructor in Romance Languages, Brown University
- AYCOCK, THOMAS MALCOLM, M.A.
Professor of Physical Education
- BEVINGTON, MRS. HELEN SMITH, M.A.
Assistant Professor of English
- BEVINGTON, MERLE MOWBRAY, Ph.D.
Associate Professor of English
- BLOMQUIST, HUGO LEANDER, Ph.D.
Professor of Botany
- BOLMEIER, EDWARD CLAUDE, Ph.D.
Professor of Education
- BOOKHOUT, CAZLYN GREEN, Ph.D.
Associate Professor of Zoology
- BORSTELMANN, LLOYD J., Ph.D.
Assistant Professor of Psychology
- BRADSHAW, CHARLES KILGO, Ph.D.
Associate Professor of Chemistry
- BRAIBANT, RALPH J. D., Ph.D.
Associate Professor of Political Science
- BROWN, FRANCES CAMPBELL, Ph.D.
Associate Professor of Chemistry
- BROWNLIE, WILLIAM HUGH, Ph.D.
Assistant Professor of Old Testament
- CARLITZ, LEONARD, Ph.D.
Professor of Mathematics
- CARPENTER, DAVID WILLIAMS, Ph.D.
Professor of Physics
- CARTIER, ALLAN MURRAY, Ph.D.
Assistant Professor of Economics and Research Associate
- CARTWRIGHT, WILLIAM H., Ph.D.
Professor of Education
- CHAIKEN, LEON EDWARD, M.F.
Associate Professor of Forest Management and Assistant Director of the Forest
- CHEEK, MRS. ROMA SAWYER, Ph.D.
Assistant Professor of Political Science
- CHILDS, BENJAMIN GUY, M.A.
Professor of Education
- CLARK, ROMANE L., Ph.D.
Instructor of Philosophy
- COLLIER, GEORGE HENRY, Ph.D.
Assistant Professor of Psychology
- COLVER, ROBERT MERLE, Ed.D.
Assistant Professor of Education
- CORDLE, THOMAS HOWARD, Ph.D.
Assistant Professor of Romance Languages
- CUSHMAN, ROBERT E., Ph.D.
Professor of Systematic Theology
- DANIELS, BOYD LEE, B.D.
Instructor in Undergraduate Religion
- DAVIS, GIFFORD, Ph.D.
Professor of Romance Languages
- DE CONDE, ALEXANDER, Ph.D.
Assistant Professor of History
- DEMAREST, JEAN-JACQUES, Ph.D.
Assistant Professor of Romance Languages
- DEWEY, DONALD J., M.A.
Assistant Professor of Economics
- DICKENS, ROBERT L., M.S., C.P.A.
Assistant Professor of Accounting
- DRESSER, FRANCIS GEORGE, Ph.D.
Professor of Mathematics
- EASLEY, HOWARD, Ph.D.
Associate Professor of Education
- ELLIOTT, WILLIAM WHITFIELD, Ph.D.
Professor of Mathematics
- ELLIS, LEON HUBBARD, Ph.D.
Lecturer in Political Science
- FERGUSON, ARTHUR BOWLES, Ph.D.
Associate Professor of History
- GARMEZY, NORMAN, Ph.D.
Assistant Professor of Psychology
- GERGEN, JOHN JAY, Ph.D.
Professor of Mathematics
- GILBERT, ALLAN H., Ph.D.
Professor of English
- GOHDES, CLARENCE, Ph.D.
Professor of English
- GRANT, RICHARD BABSON, Ph.D.
Instructor in Romance Languages

- GRAY, IRVING EMERY, Ph.D.
Professor of Zoology
- HAMILTON, WILLIAM BASKERVILLE, Ph.D.
Professor of History
- HARRAR, ELLWOOD SCOTT, Ph.D.
Professor of Wood Technology
- HART, HORNE LL NORRIS, Ph.D.
Professor of Sociology
- HARWELL, GEORGE CORBIN, Ph.D.
Assistant Professor of English
- HERON, STEPHEN DUNCAN, JR., M.S.
Instructor in Geology
- HOWARD, LAWRENCE VAUGHAN, Ph.D.
*Visiting Professor in Political Science,
Tulane University*
- INGLES, THELMA, R.N., M.A.
*Assistant Professor of Nursing Educa-
tion and Director, Division of Nursing
Education*
- JACOBANSKY, ANN, R.N., M.S.
*Assistant Professor of Nursing in
Charge of Nursing Education,
School of Nursing*
- JOERG, FREDERICK CHARLES, M.B.A.
Associate Professor of Economics
- JONES, EDWARD ELLSWORTH, Ph.D.
*Assistant Professor of Psychology, and
Associate in Clinical Psychology in the
Department of Psychiatry*
- KALE, WILLIAM ARTHUR, B.D.
Professor of Practical Theology
- KOTTLER, BARNET, Ph.D.
Instructor in English
- LACY, CREIGHTON, Ph.D.
*Assistant Professor of Missions and
Social Ethics*
- LANE, WILLIAM GUERRANT, Ph.D.
Instructor in English
- LEMERT, BENJAMIN FRANKLIN, Ph.D.
Associate Professor of Economics
- MCKENZIE, LIONEL WILFRED, JR., M.A.
Assistant Professor of Economics
- MANN, EVERETT JAMES, M.B.A., C.P.A.
Associate Professor of Accounting
- MAXWELL, WILLIAM CARY, Ph.D.
Associate Professor of German
- MONTFORT, ROBERT JOHN, B.A.
*Associate Professor of Physical
Education*
- NACE, GEORGE W., Ph.D.
Assistant Professor of Zoology
- PATTON, LEWIS, Ph.D.
Associate Professor of English
- PEACH, WILLIAM BERNARD, Ph.D.
Assistant Professor of Philosophy
- PETRY, RAY C., Ph.D.
Professor of Church History
- PETTY, OLAN LEE, Ph.D.
Assistant Professor of Education
- PHILLIPS, JAMES HENRY, Ph.D.
*Associate Professor of Biblical
Literature*
- PREDMORE, RICHARD LIONEL, D.M.L.
Professor of Romance Languages
- RAPPAPORT, JOSEPHINE, R.N., M.A.
*Assistant Professor of Nursing Educa-
tion and Assistant Director, Division of
Nursing Education*
- REYNOLDS, THOMAS D., Ph.D.
Assistant Professor of Education
- RODNICK, ELIOT H., Ph.D.
*Professor of Psychology, and Director
of Clinical Training in Psychology*
- ROPP, THEODORE, Ph.D.
Associate Professor of History
- ROSE, JESSE LEE, Ph.D.
Associate Professor of Latin and Greek
- ROY, DONALD FRANCIS, Ph.D.
Assistant Professor of Sociology
- RUBIO, ANGEL MAROTO, M.A.
Instructor in Romance Languages
- RUDISILL, MABEL F., Ph.D.
Associate Professor of Education
- SALES, REAMES HAWTHORNE, Ph.D.
*Assistant Professor of Undergraduate
Religion*
- SAYLOR, JOHN HENRY, Ph.D.
Professor of Chemistry
- SCHAFER, THOMAS ANTON, Ph.D.
*Assistant Professor of Historical
Theology*
- SCHIETLER, CLARENCE HENRY, Ph.D.
Associate Professor of Sociology
- SCHUMACHER, FRANCIS XAVIER, B.S.
Professor of Forestry
- SCHWERMANN, ESTHER LOUISE, Ph.D.
Assistant Professor of English
- SMITH, ROBERT SIDNEY, Ph.D.
Professor of Economics
- STEVENS, HARRY R., Ph.D.
Assistant Professor of History

STROBEL, HOWARD AUSTIN, Ph.D.
Assistant Professor of Chemistry

STUMPF, WIPPERT ARNOT, Ph.D.
Associate Professor of Education

THARP, KENNETH, JR., B.S.
Instructor in Civil Engineering

TILLEY, KATHERINE, R.N., B.S. N.Ed.
Instructor in Psychiatric Nursing

TORRE, ELIAS, M.A.
*Assistant Professor of Romance
Languages*

TRUESDALE, JAMES NARDIN, Ph.D.
Associate Professor of Greek

TURNER, ARLIN, Ph.D.
Professor of English

VERNBERG, F. JOHN, Ph.D.
Instructor in Zoology

WATSON, RICHARD LYNESS, JR., Ph.D.
Associate Professor of History

WEITZ, HENRY, Ed.D.
Associate Professor of Education

WETHINGTON, LEWIS ELBERT, Ph.D.
*Assistant Professor of Undergraduate
Religion*

WILBUR, KARL MILTON, Ph.D.
Professor of Zoology

WILDER, PELHAM, JR., Ph.D.
Assistant Professor of Chemistry

WILSON, FREDERICK ELIPHAZ, A.M.
Associate Professor of German

ZENER, KARL EDWARD, Ph.D.
Professor of Psychology

ZUKOWSKI, HALINA, R.N., B.S., M.L.
*Assistant Professor of Psychiatric Nurs-
ing and Director of Psychiatric Pro-
gram*

To Former Students and to Prospective Students of the Summer Session

The Summer Session at Duke University makes available to Duke students, to students from other universities and colleges, to teachers in elementary and secondary schools, and to other special students a notable program of instruction in many fields of knowledge, both academic and professional.

Course programs offered during the summer are designed to meet special and particular needs as well as the more conventional requirements leading to specific degrees.

Undergraduates of Duke University who desire to accelerate their programs may complete the work for a degree in three years by attending two and one-half Summer Sessions.

Graduates of accredited high schools, both men and women, who have been admitted to the freshman class of Duke University may begin their work in the Summer Session.

Undergraduates from other colleges and universities may enjoy the special advantages of summer instruction at Duke and transfer earned credits to their own institutions.

Graduate students who have been admitted to the Graduate School to study for the Master of Arts, Master of Education, and Master of Arts in Teaching degrees will find courses arranged in sequence from summer to summer to meet their requirements.

Teachers from elementary and secondary schools who desire to earn credits toward the renewal of their certificates and who are interested in further teacher training in subject content and method may enroll in senior-graduate courses as special or unclassified students.

While the summer course program meets in many departments the needs of degree candidates, it goes beyond these limits in presenting also courses of wide general interest and, in addition, special non-credit lectures, concerts, plays, conferences, institutes, and workshops.

Duke University's ample and modern research facilities will be available during the summer to all properly qualified students. It is the hope of the University, of the summer faculty, and of the administrative officers that former students and new students will find increasing values in each summer spent at Duke.

THE DIRECTOR.

Admission



THE general requirement for admission to the Summer Session is graduation from an accredited secondary school or its equivalent. Rejection of a student's application for admission to one of the University's Colleges or Schools does not preclude admission of that student to the Summer Session as a special or unclassified student.

Admission to specific courses offered in the Summer Session is governed by the student's academic status (freshman, sophomore, junior, senior, graduate, special or unclassified) and by the pre-requisites of the course in question.

Students in Residence at Duke University during the Spring Semester 1954

A Duke University student, either graduate or undergraduate, who plans to attend the Summer Session should enroll with the dean of his college or school (see p. 20 for specific dates). He need *not* file with the Summer Session the application blank at the end of this *Bulletin*.

Students Not in Residence at Duke University during the Spring Semester 1954

UNDERGRADUATES. New students seeking to enter Duke University as freshmen or as undergraduates with advanced standing, and undergraduates who wish to re-enter the University should write the Admissions Office. Men will address their application to the Director of Admissions, Trinity College and the College of Engineering; women will address their application to the Director of Admissions, The Woman's College.

Undergraduates, both men and women, enrolled in other colleges and universities who desire to earn in the Duke University Summer Session credits which are to be transferred to their own institutions should apply directly to the Director of the Summer Session, Duke University, on the application form at the end of this *Bulletin*. They should give accurately and clearly all information called for on the application form.

GRADUATES. Students with graduate standing and teachers in service with or without the Bachelor's degree who wish to earn credits toward the renewal or the advancement of their certificate and who do not wish to become candidates for a degree at Duke University should apply to the Director of the Summer Session on the application form at the end of this *Bulletin*.

Graduate students who are seeking admission to the Graduate School of Arts and Sciences and those who have been admitted to the Graduate School must apply to the Director of the Summer Session on the application form at the end of this *Bulletin*. Those who are seeking admission to the Graduate School *must also file* Graduate School application forms which may be secured by writing to the Dean of the Graduate School, Duke University, Durham, North Carolina.

Admission to Degree Candidacy

Credits earned during the Summer Session may be applied toward the requirements of a degree.

UNDERGRADUATES. A student seeking to enroll as a candidate for the Bachelor's degree from one of the colleges of Duke University must meet the entrance requirements set forth in the *Bulletin of Undergraduate Instruction*. This *Bulletin* may be secured by writing the Director of Admissions, Trinity College and the College of Engineering, or the Director of Admissions, The Woman's College, Duke University.

GRADUATES. A student seeking to enroll as a candidate for one of the advanced degrees offered by the Graduate School of Arts and Sciences of Duke University must meet the requirements set forth on pages 32-38 of this *Bulletin*.

Admission of Veterans

All veterans who plan to attend Duke University during the Summer Session of 1954 and who expect to receive benefits under the so-called G.I. Bill of Rights should write directly and promptly for instructions to the Duke University Veterans' Office. This should be done as soon as the veteran is reasonably certain he will attend the Summer Session. Letters should be addressed to: The Veterans' Office, Administration Building, Duke University, Durham, North Carolina.

Financial Information, Living Accommodations, and Medical Care



Fees

The University Fee:

Covering registration, tuition, and medical care.....	\$12.00 per semester hour
Teachers in full-time service in Elementary and Secondary Schools.....	6.00 per semester hour
Registered Nurses enrolled in Nursing Education courses	6.00 per semester hour

Laboratory Fees: (These where applicable are in addition to the University Fee.)

The School of Spanish Studies.....	\$15.00
Marine Laboratory.....	10.00

Fees Replacing University Fee:

Medical Mycology	\$50.00
Conference for Teachers of Science and Mathematics.....	8.00

Master's Degree Summer Session Fee:

Candidates for the Master's degree who do 15 hours or less of the program in Summer Sessions and who complete the thesis and/or take the final examination in the Summer Session pay a degree fee of.....	\$12.50
When more than 15 hours is taken in Summer Sessions and final examination is taken through the Office of the Summer Session, the degree fee is	\$25.00

Auditing Fees (See p. 22 for definition):

1. Students registered for a full course program may audit non-laboratory courses (with the permission of the Director) at no extra charge.
2. Students carrying less than a full course program may be granted permission to audit a course or courses on payment of half the University fee per semester hour audited.....\$ 6.00 per s.h.

Late Registration Fee:

Students who fail to register prior to the first class day of a given course will pay an extra fee of.....	5.00
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Fee for Course Changes:

Course changes other than those required by the University will be made only on payment of an extra fee of.....	1.00
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Fee for Make-up Final Examination:.....	3.00
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Refund of Fees:

- a. When applications for withdrawal are received by the Director of the Summer Session before the close of registration on registration day, full fees will be refunded.
- b. When applications for withdrawal are received by the Director of the Summer Session during the first four class days of a given term 80 per cent of the fees will be refunded.
- c. When applications for withdrawal are received by the Director of the Summer Session after the fourth class day there will be no refund of fees.

Student Aid

HALF-FEES TO TEACHERS AND REGISTERED NURSES: Teachers in full-time service in elementary and in secondary schools and registered nurses enrolled in Nursing Education courses are given a rebate of one-half the University fee. Teachers on leave of absence from their schools and teachers not currently employed are not eligible for this rebate.

SCHOLARSHIPS FOR PUBLIC SCHOOL TEACHERS: Duke University will award a minimum of thirty special scholarships of \$100.00 each to high school and elementary teachers on a competitive basis (not by a written examination) for the Summer Session of 1954. This scholarship program is designed to encourage teachers to begin or to continue their graduate studies leading to the A.M., M.Ed., or M.A. in Teaching degree.

Although successful applicants will not be required to become candidates for a degree, they must qualify for and receive admission to the Graduate School of Arts and Sciences.

All applications with supporting documents must be submitted by April 1, 1954. Selection and appointment of scholars will be completed by May 1, 1954.

Application blanks and complete information may be obtained from the Director of the Summer Session, Duke University, Durham, North Carolina.

LOANS: A number of loan funds have been established for the benefit of the students of Duke University. Several of these funds are available to students enrolled in the Summer Session. These funds are administered through a committee of officers of the University.

The sum which accrues annually for loans to students enrolled in the Summer Session is limited and not sufficient to cover all applications. The committee, in approving loans, selects those students who from the standpoint of character, scholastic attainment, personality, and degree of financial need are most deserving of consideration.

The following regulations govern the operation of the Summer Session loan fund program:

1. No loan shall be made to a student who violates any of the regulations of the University or whose academic record is not satisfactory to the faculty.

2. All loans must be arranged for not later than one week after the beginning of a term.

3. Every applicant for a loan must give the names of two references who will be contacted by the Student Loan Office. Statements from these references must have been received and made a part of the borrower's file before any money will be advanced. Neither of these references may be a member of a borrower's family.

4. No loan will be made to defray any expenses other than those incurred during the Summer Session for the University fee.

5. All loans must be repaid within six months following the close of the Summer Session in which the loan is made.

6. Simple interest at the rate of six per cent annually shall be charged for all loans made during a summer session.

7. Applicants for loans should make application to the Loan Committee, Office of the Secretary, Duke University. A formal application for loan assistance may be made only on forms furnished in the Secretary's Office during the first week of each term. The granting or withholding of a loan is a matter entirely within the discretion of the Loan Committee. A student is expected to use all other possible means of securing financial assistance before applying for aid from the loan fund.

Dormitory Accommodations

The dormitory facilities of Duke University West Campus will be used for the 1954 Summer Session except in the case of the Marine Laboratory. The Men's Graduate Center will be used for graduate men. Few Quadrangle will be available for undergraduate men. Crowell Quadrangle will be used for women with designated houses reserved for graduate women and undergraduate women. Epworth Hall, on The Woman's College Campus, will be available to graduate women, preferably to those who desire to attend the twelve-week term of the Summer Session. The University does not provide living accommodations for married couples.

Most rooms are furnished for two persons. Only a limited number of rooms are furnished as singles for one person. Furniture consists of single beds, 39" x 74", with mattresses, an individual clothes closet for each person, a chest of drawers for two persons, a study table, chairs, bookcase, waste basket, and window shades. Linens, blankets, towels, and pillows are not furnished by the University.

The School of Spanish Studies will be housed in Craven Quadrangle, which will offer segregated housing and other facilities desired for the School of Spanish Studies.

The Marine Laboratory is located on Pivers Island adjoining the United States Bureau of Fisheries across the Newport River from Beaufort, North Carolina. Three cottage-type dormitories are available with a separate building for dining hall and social activity. All rooms in the Marine Laboratory dormitories are equipped for two persons.

Dormitory Rooms—Rates

Single Room	12 weeks' term.....	\$60.00	
	6 weeks' term.....	30.00	
	5 weeks' term.....	25.00	
	4 weeks' term.....	20.00	
	3 weeks' term.....	15.00	
	2 weeks' term.....	10.00	
	1 week's term.....	5.00	
Double Room	12 weeks' term.....	\$84.00	\$42.00 each person
	6 weeks' term.....	42.00	21.00 each person
	5 weeks' term.....	35.00	17.50 each person
	4 weeks' term.....	28.00	14.00 each person
	3 weeks' term.....	21.00	10.50 each person
	2 weeks' term.....	14.00	7.00 each person
	1 week's term.....	7.00	3.50 each person
Double Room Furnished as a			
Single Room and Occupied by			
One Person.....	12 weeks' term.....	\$80.00	
	6 weeks' term.....	40.00	
	5 weeks' term.....	33.35	
	4 weeks' term.....	26.70	
	3 weeks' term.....	20.00	
	2 weeks' term.....	13.35	
	1 week's term.....	6.70	

Applications for room reservations accompanied by the full amount of the room rent for the term concerned should be made to Duke University Housing Bureau, Duke Station, Durham, North Carolina. Rooms will be reserved in the order in which applications are received. Notification of assignments to rooms will be made about May 15 for the first term; about July 10 for the second term.

Rooms are available to applicants twenty-four hours prior to the registration for a specific term of the Summer Session. A room is to be vacated by the occupant within twenty-four hours after the last final examination. Any period of occupancy other than for a specific term of the Summer Session must be arranged for at the Office of the Housing Bureau, 03 New Administration Building.

Applicants should be sure to express their preference as to roommates, if they have a preference. If no preference of roommate is expressed, the Housing Bureau will assign a roommate; however, the Office does not assume responsibility in this matter.

Estimated Cost of a Six-Week Term:

University Fee, 6 s.h.....	\$ 72.00
Teachers (elementary and secondary) in full-time service, and	
Registered Nurses in nursing education courses, \$36.00	
Dormitory Rooms (2 occupants, \$21.00 per person).....	21.00
Meals (Cafeteria selective: average per day \$2.00).....	80.00
Books and Class Materials \$7.00 to \$10.00.....	8.50
Miscellaneous (laundry, etc.).....	12.00
Total (elementary and secondary teachers in full-time service and	
Registered Nurses in nursing education courses deduct \$36.00).....	
	\$193.50

Medical Care

With the exceptions noted below, full medical and surgical care is furnished to all regularly matriculated students of the University during the Summer Session at no additional cost to them beyond the University fee for each six-week term of residence, or any shorter period. This service is under the direction of the University Physician with the cooperation of the staff of Duke Hospital. It includes hospitalization for a maximum period of six days, medical and surgical care, drugs, dressings, X-ray work, and ward, but not special nursing. Refraction of eyes, treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernias, elective surgery, chronic skin conditions, endocrine disturbances, etc., or accidents or illness occurring during vacations or while off the campus, are not included in this service. The cost of braces and necessary orthopaedic appliances and of blood, as well as special nursing, must be borne by the student. A charge for board will be made of the student while he is in the hospital. All necessary telephone and telegraph charges will be borne by the student.

No illness is treated in dormitory or other rooms occupied by students. Students needing treatment for minor medical or surgical conditions have the facilities of the Student Health Office in the Hospital between 9:00 a.m. and 5:30 p.m. on week-days. Emergency room care is available at night and on Saturday afternoons and Sundays. For admission to the hospital, or for X-ray and consultation services, a student *must* present the 1954 Summer Session Health and Recreation Card as evidence that he is matriculated in the Summer Session and entitled to hospitalization. No student is eligible for student health who is registered for less than 3 semester hours credit.

Registration



Definition of Terms

REGISTRATION. A student has completed registration for the Summer Session when:

1. His course program has been written and approved by the dean of the school or college in which he is enrolled or by the Director of the Summer Session in the case of the special or unclassified student.
2. Summer Session forms have been completed properly by the student in the Summer Session Office.
3. Summer Session University fees have been paid.

PRE-ENROLLMENT. The term pre-enrollment refers only to the writing of the course program and its approval by the proper deans or by the Director of the Summer Session in the case of the special or unclassified student. *Pre-enrollment alone does not constitute registration.*

General Registration

CLASSES BEGINNING JUNE 10. All Summer Session students whose classes begin on June 10, Term I, who *do not* complete registration in the Summer Session Office 119 New Administration Building, on or before June 5 *must* present themselves at general registration in the new gymnasium on June 9 to register. Students will register during 30-minute periods alphabetically according to *sur-name* as indicated in the following table.

<i>Time</i>	<i>Registrants (Surname)</i>
9:00- 9:30	N - P
9:30-10:00	Q - R
10:00-10:30	S
10:30-11:00	T - V
11:00-11:30	W - Z
11:30-12:00	A - B
12:00-12:30	C
2:00- 2:30	D - E
2:30- 3:00	F - G
3:00- 3:30	H - J
3:30- 4:00	K - L
4:00- 4:30	Mc - M

CLASSES BEGINNING JUNE 15. All Summer Session students whose classes begin on June 15, Term I, who *do not* complete registration in the Summer Session Office on or before June 12 must register in the Summer Session Office, 119 New Administration Building, on June 14.

CLASSES BEGINNING JUNE 22. All Summer Session students whose classes begin on June 22, Term I, who *do not* complete registration in the Summer Session Office on or before June 19 must register in the Summer Session Office, 119 New Administration Building, on June 21.

CLASSES BEGINNING JUNE 29. All Summer Session students whose classes begin on June 29, Term I, who *do not* complete registration in the Summer Session Office on or before June 26 must register in the Summer Session Office, 119 New Administration Building, on June 28.

CLASSES BEGINNING JULY 21. All Summer Session students who wish to register for courses offered during Term II or for research during Term II may register in the Summer Session Office on July 6 through July 15. All students who *do not* register for second term during this period *must* register in the Summer Session Office, 119 New Administration Building on July 20.

CLASSES BEGINNING ON OTHER DATES. All Summer Session students registering for courses beginning on dates other than those specified above must complete registration in the Summer Session Office *before* the date on which their classes begin. *Registration on the day on which classes are scheduled to begin will be considered late registration.*

Late Registration

Any student who fails to register on or before the dates specified in the preceding paragraphs will be charged a fee of \$5.00 for late registration. No student will be permitted to register for a 3 semester hour course after the fourth class day (June 14, Term I; July 24, Term II); a 4 semester hour course after the third class day (June 24, Term I; July 23, Term II); a 5 semester hour course after the third class day (June 17, Term I; July 23, Term II). Changes in courses other than those required by the University will require a payment of \$1.00 for each change made. All changes must be approved by the dean of the school or college in which the student is enrolled or, in the case of the special or unclassified student, by the Director of the Summer Session. These registration rules are enforced rigidly.

Since Summer Session courses present a program of study in more concentrated and rapid form than in the regular semesters, students are advised to register on time and to be present at all class sessions.

*Advance Registration***STUDENTS IN RESIDENCE AT DUKE UNIVERSITY DURING THE SPRING SEMESTER 1954.**

WRITING COURSE PROGRAMS IN THE SCHOOLS AND COLLEGES. Students in residence at Duke University during the Spring Semester 1954, both graduate and undergraduate, who plan to enroll for courses offered in the 1954 Summer Session or to carry on research during the period of the Summer Session will write course programs and have them approved in their respective schools or colleges on the dates specified below:

Trinity College

April 26-April 27—rising seniors

April 28-April 30—rising juniors

May 3-May 5—freshmen and rising sophomores

College of Engineering

April 26—rising seniors

April 28—rising juniors

May 3—rising sophomores

Woman's College

April 26-April 27—rising seniors

April 28-April 30—rising juniors

May 3-May 5—rising sophomores

The School of Nursing

May 6-May 7—all students planning to attend the Summer Session

The Divinity School

May 6-May 7—all students planning to attend the Summer Session

The Graduate School of Arts and Sciences

May 3-May 4—all students planning to attend the Summer Session

ADVANCE REGISTRATION IN THE SUMMER SESSION OFFICE. Students in residence whose course programs have been written and approved by their respective colleges on the dates indicated above may complete their registration in the Summer Session Office, 119 New Administration Building, on the following dates:

Graduate students May 3 through June 5

Undergraduate students May 17 through June 5

Registration in the Summer Session Office includes:

1. Completion of various Summer Session forms.
2. Payment of University fees.

A student who registers with the Summer Session Office during this period *will not* be required to be present at general registration on June 9. He will begin his class work on the date his classes are scheduled to begin: June 10, June 15, June 22, or June 29.

STUDENTS NOT IN RESIDENCE AT DUKE UNIVERSITY DURING THE SPRING SEMESTER 1954.

ADVANCE REGISTRATION BY MAIL. Students not in residence at Duke University during the Spring Semester 1954—new undergraduate students seeking to enter as degree candidates, graduate students who are not candidates for an advanced degree at Duke University, graduate and undergraduate students of other colleges and universities desiring to earn credits for transfer, public school teachers and college teachers (not advanced degree candidates)—may register by mail. Advance registration by mail includes:

1. Completion in full of the application form at the end of this *Bulletin*.
2. Admission to the Summer Session by the Director of the Summer Session and, in the case of students seeking to enter Duke University as degree candidates, admission by the dean to the school or college of Duke University concerned.
3. Completion in full and return of forms required by the Summer Session Office by June 5.
4. Payment of University fees by June 5.

A student may *pre-enroll* by mail without paying the University fees, but he *cannot register in advance* without doing so.

Students who complete registration by mail on or before June 5 need not be present at the general registration on June 9.

DEGREE CANDIDATE GRADUATE STUDENTS NOT IN RESIDENCE DURING THE SPRING SEMESTER 1954. All graduate students not in residence during the Spring Semester 1954 who are candidates for an advanced degree in the Graduate School of Arts and Sciences of Duke University *must* present themselves for registration at the gymnasium on June 9. They cannot complete registration by mail because:

1. Their program of study for the summer must be approved by their Director of Graduate Studies.
2. Their course programs must be written and approved by the Graduate School of Arts and Sciences.

These students may pre-enroll by mail with the Summer Session Office and may pay their fees in advance, but they cannot complete their registration.

Academic Regulation



Kinds of Course Enrollment

SUMMER SESSION courses may be taken for "credit" or for "non-credit" or may be "audited." A student's program may be exclusively in one of these categories, or may combine any two of them or all three. Students taking a full or partial program for "credit" may enroll as auditors or as non-credit students in any number of additional courses.

CREDIT. The Summer Session term "credit" does not mean degree credit at Duke University unless the student has been admitted as a degree candidate by one of the colleges or schools of the University. A student taking a course for credit is expected to do all the work required and to take the final examination, and he will receive a grade. G.I. Bill benefits are available only to those veterans who enroll for credit.

NON-CREDIT. "Non-credit" enrollment is available to the student who wishes the privilege of participating in class discussions, exercises, and laboratory assignments but does not wish to take the examinations either mid-term or final. A "non-credit" student may do as much of the work of the course as he desires, but he may not take the final examination and he will not receive a grade. Full fees of \$12 per semester hour are required in "non-credit" enrollment.

AUDIT. An auditor is entitled to listen to lectures and class discussions, but he may not participate in discussions or take examinations. Students may not enroll as auditors in laboratory courses. A student carrying a full program for credit may be given permission to audit as many courses as he desires without additional fees. Students carrying less than a full program for credit may secure permission to audit but are required to pay the auditing fee of \$6 per semester hour.

Eligibility for Course Enrollment

Courses numbered 1-49 are primarily for freshmen, or freshmen and sophomores. Courses numbered 50-99 are ordinarily for sophomores, or sophomores and juniors. Courses numbered 100-199 are designed for juniors and seniors. Courses numbered 200-299 are planned for

seniors and graduates. Courses numbered from 300 up admit graduate students only. Courses numbered from 200 up are limited in enrollment to 25 students.

Length of Course and Credits Allowed

The Summer Session courses are of the same quality and credit value as courses in the regular semester. Credit earned in the Summer Session is in terms of semester hours. The majority of Summer Session courses carry 3 semester hours credit and require six weeks in residence. A limited number of basic courses in the sciences run for four weeks (Chemistry, Geology, Zoology) or five weeks (Physics). Introductory foreign language courses are given intensively on a three-week basis, as are a limited number of courses in Nursing Education.

The Normal Course Program

The normal and maximum program for a six-week term is 6 semester hours. The 4 and 5 semester hour courses in the sciences run for four and five weeks respectively and one such course constitutes a full course program.

Grading

Only a student taking a course for credit will receive a grade. The grade given represents the quality of the work done in the course.

PASSED.

Undergraduate Grades

A — excellent

B — good

C — average

D — poor but passing

Graduate Grades

E — exceptional

G — good

S — satisfactory

FAILED. A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class.

INCOMPLETE. A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

ABSENT FROM FINAL EXAMINATION. The grade X indicates that the student was absent from the regularly scheduled examination. A student absent from examination, if the absence has been

excused by the dean of the college or school in which he is enrolled or, in the case of the special or unclassified student, by the Director of the Summer Session, may receive an examination upon the payment of \$3 to the Treasurer of the University. The Instructor concerned arranges for the examination in cases where absences are excused. A student with an X grade who has not obtained a passing grade before the end of the semester following that in which the X was incurred is regarded as having failed in the course concerned and must repeat the work in class in order to receive credit. If a student's absence from an examination is not excused by the dean of the college or school in which he is enrolled or, in the case of the special or unclassified student, by the Director of the Summer Session, his grade for the course concerned is recorded as F.

Dropping of Courses

If a student drops a course without permission from the dean of the school or college in which he is enrolled or, in the case of the special or unclassified student, the Director of the Summer Session, the grade for that course is recorded as F. If he drops a course with permission, the grade for that course is F unless, in the judgment of the dean or director, circumstances do not justify this penalty.

Withdrawal from the Summer Session

If a student wishes to withdraw from the Summer Session, he must notify both the dean of the school or college in which he is registered and the Director of the Summer Session.

Absences

Full credit will not be allowed any student who incurs more than four absences in a course. Days missed through late registration are counted as absences, and three tardies in a given course are counted as one absence.

Examinations

Final examinations in courses are held on the two last days of each term. Final examinations for short courses which occupy the student's complete program will be held on the last day of the course. The examination dates for 1954 are:

First term: July 16-17.

Second term: August 26-27.

Courses in science which begin after the opening date for the first term have been scheduled so that their final examination will come on July 17. The science courses which begin July 20 and run for four weeks will have their final examination on August 14. Final examination for Physics S52 will be on August 20. The University has no provision for giving examinations *in absentia*. Students absent from examinations for valid reasons are permitted a liberal extension of time to return to the University for completion of credit.

Credits for Transfer

A student desiring either graduate or undergraduate credits transferred from Duke University to his university or college as degree credit must request from the Director of the Summer Session, Duke University, a "Course Approval Form" to be completed by the student's Dean or Registrar and returned to the Director of the Summer Session, Duke University.

Professional Credits Toward Teachers' Certificates

Professional credits toward teachers' certificates are granted by the various state boards of education, each in accordance with its own carefully planned rules. Teachers in service, before enrolling for certification credit, should consult the rules laid down by their State Board of Education. If necessary, they should send to their State Board of Education a list of the courses in which they plan to enroll and inquire whether these will be acceptable for certification credit.

University Services, Publications, and Student Activities



Appointments Office

THE APPOINTMENTS OFFICE is maintained in Page Building the year around. The services of this Office are available without charge to students and teachers registered for a degree in Duke University and to school officials who may be seeking the services of new teachers. Students interested in securing employment through the Appointments Office should register with this Office.

The Bureau of Testing and Guidance

The University maintains a Bureau of Testing and Guidance which provides a centralized program of educational, vocational, and personal counseling for students. In addition, the Bureau administers special group testing programs for University schools and departments and serves as the local testing center for a wide variety of national testing programs. The Bureau also carries on programs of research in the field of measurement and counseling. Although the counseling, testing, and research services of the Bureau are designed primarily to meet the needs of the students, the faculty, and the staff of Duke University, these services are made available to individuals and organizations outside the University as its facilities permit. Requests for further information should be addressed to the Director, Bureau of Testing and Guidance, Duke Station, Durham, North Carolina.

Post-Doctoral Research

Scholars engaged in post-doctoral research find it advantageous and sometimes essential to use in summer the resources of the Duke University libraries. The University welcomes these visitors and makes available to them the living accommodations of the dormitories and the dining halls during the Summer Session, June 9 to August 27. Application for these post-doctoral research privileges must be made in advance by letter to the Director of the Summer Session, giving the applicant's present position, the specific field of his research interest,

and the dates during which he desires to be in residence. Approved applicants will be accepted subject to the availability of library and of dormitory space.

The Sundial

During the Summer Session the University will publish each Saturday *The Sundial*, an official calendar announcing events—academic, social and recreational—of the following week. This calendar also includes official notices concerning academic requirements. Students are expected therefore to read *The Sundial* regularly.

Recreation and Social Activities

The Summer Session will provide a varied program of entertainment and recreation. These plans include movies, presented twice weekly by Quadrangle Pictures; the traditional Sunday evening sings; weekly summer dances and open house social evenings with games for those who do not care to dance. Tours to areas of interest can be arranged for week-ends. Both the mountains and the seashore are easily accessible. Adequate facilities are available for those interested in swimming, tennis, and other sports. State clubs organized for the summer play an active part in all social activities.

Resources of the University



THE UNIVERSITY LIBRARIES, with 1,125,450 volumes and 1,525,000 manuscripts, provide exceptional resources and facilities for study and research by undergraduate and graduate students and visiting scholars. Between 40,000 and 50,000 volumes are added annually, while seventy-one foreign and domestic newspapers and 4,000 periodicals are received currently. There is also a large collection of microfilms of rare books, newspapers, and periodicals. Study facilities are provided for 250 graduate students in the air conditioned stacks of the General Library.

The laboratories in the various Science Departments (Botany, Chemistry, Physics, and Zoology) are designed for both teaching and research. Ideal locations for special work in some of the sciences are available at Duke University Marine Laboratory at Beaufort, North Carolina; at Highlands Biological Laboratory at Highlands, North Carolina; in the Duke Forest at Durham, North Carolina; and in the Sarah P. Duke Gardens on the West Campus of Duke University.

The Chapel, home of Duke University Church, interdenominational, is open all summer. The church encourages the cultivation of the spiritual and moral life of students through participation in the service of worship which is held each Sunday morning at eleven o'clock. The pulpit is occupied by a regular University Preacher, or a special visiting preacher. Choral music for these services is provided by a volunteer student choir.

Organ recitals are presented periodically by the University Organist, and Carillon recitals twice a week, on Sunday afternoon and Thursday evening, by the University Carillonneur.

Special Conferences and Courses



THE SCHOOL OF SPANISH STUDIES: The Thirteenth annual session of the School of Spanish Studies, June 9 to July 17, will present a program including undergraduate work and advanced oral Spanish, as well as graduate work in language and in Spanish literature. In addition to the regular staff of Duke University, native visiting professors and native assistants will aid students in their everyday use of Spanish.

Faculty, assistants and students will live together in the *Residencia* (House D). The parlor and Craven Quadrangle will be the center of an Hispanic social program. All will have their meals together in a private dining-room, and a member of the staff or a native assistant will be in charge of conversation at each table. The language spoken at all times will be Spanish. Bona fide residents of Durham, or those who are registered in one course in another department may seek, with the permission of the Director of the School, adjustment in the rule concerning living in the *Residencia*.

Because of the special facilities provided in the School of Spanish Studies, a special fee of \$15.00 is charged. All other expenses are the same as in other departments of the Summer Session. Payment for board for the six-week session must be made at the time of registration. *In the Residencia personal radios are not permitted.*

The program of the School of Spanish Studies is intended for the following:

1. High School and College teachers who wish to refresh their active use of Spanish, or to pursue advanced courses.
2. Graduate students and undergraduates who are majoring or minoring in Spanish.
3. Prospective teachers of Spanish and specialists in other fields (business, government service, history, etc.) whose work may require a knowledge of Spanish.
4. Undergraduates who plan to fulfill their requirement in foreign language by courses in Spanish and who desire more than a reading knowledge of the language.

For details of the School of Spanish Studies, write the Director of the Summer Session for the special *Bulletin*. The course offerings of the School are listed in this *Bulletin*.

LABORATORY CONFERENCE FOR TEACHERS OF SCIENCE AND MATHEMATICS: During the Summer Session of 1954, Duke University with the cooperation of the North Carolina Department of Public Instruction will hold on the Duke Campus the second Laboratory Conference for Teachers of Science and Mathematics. This conference will be held July 19-23, inclusive.

The basic purposes of the Laboratory Conference is to present practical and useful methods or experiments that may be used in the classroom. Training in the techniques involved in the setting up and execution of these methods or experiments will be emphasized and practiced by the participants in the program.

The program of the Conference will represent an integrated course planned and conducted by the Departments of Botany, Chemistry, Mathematics, Physics, and Zoology.

Morning and afternoon periods will be devoted to laboratory or lecture sessions. In the laboratory sessions, the members of the conference will set up and carry out with the assistance of the instructor selected exercises designed especially as aids in the teaching of science and mathematics. The evening sessions will be devoted to discussions of recent developments and to social intercourse of the members.

Membership in the Conference will be limited. While no tuition will be charged, there will be a registration fee of \$8.00. For full details, please address requests to the Director of the Summer Session, Duke University, Durham North Carolina.

THE SCHOOL FOR APPROVED SUPPLY PASTORS: The sixth session of the Duke Divinity School's short term for Supply Pastors will meet July 20 to August 6, 1954.

The new schedule of courses as outlined in the 1952 Discipline of the Methodist Church will be followed.

Courses in each of the four years' work will be offered. No more than seven books may be taken by the student. All texts must be read, using the Handbook as a guide, before coming to the school.

Classes begin July 21 at 8:30 a.m. and close at 1:00 p.m. August 6. In addition, there will be a series of workshops and illustrated lectures in the fields of interest. Some of these will carry credit in the Supply School.

A number of scholarships are available for Supply Pastors who need aid in attending the school. Students desiring such aid must pre-register and receive a scholarship allotment before coming to the sessions of the school.

For a schedule of courses, registration blanks, scholarship information, and other data, write W. A. Kale, Box 4353, Duke Station, Durham, North Carolina.

HIGHLANDS BIOLOGICAL STATION: Duke University holds a subscribing instructional membership in the Highlands Biological Station at Highlands, North Carolina, on the southern edge of the Blue Ridge Mountains at an elevation of 4,118 feet. The situation and the region offer an excellent opportunity for field studies and limited laboratory work. A limited number of qualified students in Botany and Zoology may make arrangements to carry out research at this station.

CONFERENCE OF THE NORTH CAROLINA ENGLISH TEACHERS ASSOCIATION: The annual luncheon of the twelfth English Institute of the North Carolina English Teachers Association and the afternoon meeting that follows will be held at Duke University on a date to be selected.

Other meetings of the Institute will be held at Chapel Hill, North Carolina.

Full details of the program will be announced at the spring meeting of the Association in Raleigh, North Carolina. For further information write Professor F. E. Bowman, Department of English, Duke University, or the Executive Secretary, Professor Earl H. Hartsell, Box 1050, Chapel Hill, North Carolina.

REGIONAL CONFERENCE ON SCHOOL LAW: A regional conference on school law will be held on the Duke University Campus on June 15, 16, 17. The Conference is sponsored jointly by CPEA, Middle Atlantic Region, and Duke University. The program is planned for the benefit of school administrators and professors of school administration.

Several persons well known in the field of school law will participate in this three-day conference. Representatives of the Duke and CPEA staffs, as well as various school administrators, will be participants in the various programs.

MEDICAL MYCOLOGY: A month's course in Medical Mycology, under the direction of Dr. Norman F. Conant, is to be offered at Duke University School of Medicine and Duke Hospital, July 1-31, 1954. The course will be offered every day in the week, except Sunday, and has been designed to insure a working knowledge of the human pathogenic fungi within the time allotted.

Emphasis will be placed on the practical aspects of the laboratory as an aid in helping establish a diagnosis of fungus infection. Insofar as possible and as patients become available, methods of collecting materials in the clinic for study and culture will be stressed. Work with patients, clinical material, cultures and laboratory animals will serve as a basis for this course. Also, an opportunity to study pathologic material, gross and microscopic, will be given those whose previous training would allow them to obtain the greatest benefit from a study of such material.

The enrollment for the course will be limited and the applications will be considered in the order in which they are received. An attempt will be made, however, to select students on the basis of their previous training and their stated need for this type of work.

A fee of \$50.00 will be charged for this course, upon the completion of which a suitable certificate will be awarded. Please direct inquiries to Dr. Norman F. Conant, Professor of Mycology, Duke University School of Medicine, Durham, North Carolina.

Graduate Study in the Summer Session



A STUDENT who wishes to work toward the A.M., M.Ed., M.A.T., Ph.D., or Ed.D. degree must apply for admission to the Graduate School of Arts and Sciences. Only those students who have been officially admitted to the Graduate School will be required to register in the Graduate School. It is quite appropriate for a student who holds a bachelor's degree and who desires only professional credit to apply directly to the Director of the Summer Session for admission as a special or unclassified student. It should be understood, however, that the credit earned while the student is so listed is not credit toward an advanced degree in the Graduate School of Arts and Sciences. Students who look forward to taking an advanced degree by work in the Summer Sessions should make sure that all of their documents necessary for admission to the Graduate School (see below) have been forwarded to the Dean of that School.

To make formal application the student should address the Dean of the Graduate School, Duke University, requesting official application blanks. These should be filled out fully and returned at the earliest moment. The other documents needed to complete the application, namely, transcripts, letters of recommendation, and Graduate Record Examination scores for applicants in the departments of Economics, Psychology, and English, must be forwarded directly from the institutions or individuals to the Dean of the Graduate School. In no case will such documents be accepted directly from the student.

In order that application to the Graduate School for summer work be given due consideration, the student should submit all of his documents to the Dean of the Graduate School by June 1 before the first term, and by July 10 before the second term of the Summer Session. It would be difficult to give applications received after these dates the same attention given those received earlier. After the application is accepted and approved, the student will receive a letter of admission to the Graduate School.

Admission to the Graduate School

Admission may be granted to a student who has received an A.B. or B.S. degree from an accredited institution after a four-year course

of study. The undergraduate record should be well-rounded and of such quality as to give positive evidence of capacity for success in graduate study. Before admission can be granted, the student must submit for appraisal the following documents: (a) an official transcript of all his college or graduate work, to be forwarded directly from the registrar of his college to the Dean of the Graduate School of Duke University; (b) three letters of recommendation from persons best qualified to appraise the student. In the departments of Economics, Psychology, and English, scores on all three phases of the Graduate Record Examination are required before full admission can be granted. If possible, the student should take both parts of this examination in advance of his intended registration. Arrangements can usually be made through officials at the student's college, or by correspondence with the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey. Should a student be unable to take the examination before the final admission date, he may—if his other documents are acceptable—be granted "provisional" admission until he takes the examination, which he must arrange to take at the first time it is offered, after his "provisional" admission.

Registration of Graduate Students

Students who have received a letter of admission to the Graduate School from the Director of Admissions of the Graduate School should present themselves for registration at the official registration period, June 9 for the first term, and July 20 for the second term. The student should remember that his registration with the Summer Session is not equivalent to registration in the Graduate School, and he should be sure to present himself for official registration in the Graduate School, so that his course work can be credited to his program leading to a degree. Students who have not been granted admission to the Graduate School, of course, do not register in the Graduate School.

Course Work Leading to Degree

Graduate students who wish to work toward advanced degrees in the Summer Session, particularly in Chemistry, Economics, Education, English, History, Mathematics, Religion, Sociology, Spanish, and Zoology, will find a selection of courses offered by members of the Duke faculty and by visiting professors. Other departments ordinarily offering sequences of work leading to the Master of Arts degree in a series of summer terms are Botany, Political Science, and Psychology.

The Ph.D. and Ed.D. Degrees

STUDY FOR THE PH.D. DEGREE: Students who are interested in working toward a Ph.D. degree should consult the detailed requirements as outlined in the *Bulletin* of the Duke University Graduate School of Arts and Sciences. Of the three years required as minimum residence, not more than one year can be earned in Summer Sessions. Full-time enrollment for one six-week term is counted as one-fifth of an academic year.

STUDY FOR THE ED.D. DEGREE: Students who are interested in working toward an Ed.D. degree should consult the detailed statement in the *Bulletin* of the Graduate School of Arts and Sciences. For specific information regarding residence and programs for the Ed.D. degree, please write to the Director of Graduate Studies, Department of Education.

Requirements for the Master of Arts Degree

LANGUAGE REQUIREMENTS: The candidate for the A.M. degree must have a reading knowledge of at least one foreign language. (The several departments reserve the right to specify which foreign languages are acceptable.) Evidence of such knowledge may be furnished in either of two ways: (1) by successfully passing an examination, officially conducted by the appropriate foreign language department at Duke University, or (2) by a transcript showing the completion of the third college year of one language, or the second college year of each of two acceptable foreign languages.

If the student must take the examination to satisfy this requirement, he may request—should he feel well qualified—the language examination required of candidates for the Ph.D. degree. By passing this examination, he may satisfy the requirements for both degrees at one time.

MAJOR SUBJECT: As a prerequisite to graduate study in his major subject, the student must have completed a *minimum* of 12 semester hours of approved college courses in that subject, and 12 additional semester hours in that subject or in related work. Since some departments require more than 12 semester hours, the student should read carefully the special requirements listed by his major department, which are included as headnotes to the course offerings in the *Bulletin* of the Graduate School.

In his graduate work, the student, in order to complete the course requirements for the A.M. degree, must present acceptable marks for 24 semester hours of graduate courses, of which at least 12 semester

hours must be in the major subject. In addition to these he must present a thesis, which carries a credit of 6 semester hours. Thus, his earned credit for the degree totals 30 semester hours.

MINOR SUBJECT: Beyond the work for his major, the student must take a minimum of 6 semester hours in a minor department, the department of the minor to be approved by his major department. The remaining 6 semester hours of the necessary 24 may be taken in either of these departments, or in another approved by the major department and by the Dean of the Graduate School.

TRANSFER OF CREDITS: Under certain circumstances a maximum credit of 6 semester hours may be allowed for graduate courses completed elsewhere. The acceptance of credit up to this amount, however, will not reduce the minimum period of full-time registered residence at Duke University. In no case will credit be allowed for extension or correspondence courses.

With the approval both of the student's major department and the Dean of the Graduate School, a student who is granted such transfer credit may be permitted to register for as much as 12 semester hours of thesis research instead of the usual 6 semester hours. Or he may be permitted to fill out his schedule with as much as 6 semester hours of further undergraduate training or 6 semester hours of required language courses on the undergraduate level.

CANDIDACY FOR THE MASTER OF ARTS DEGREE: After a student who has been officially admitted to the Graduate School has successfully completed 12 semester hours of graduate course work, he may apply for candidacy for the A.M. degree. Two conditions must have been met: (1) he must have passed all of his course work with at least 3 semester hours of "G" (Good) grade or better; and (2) he must present to the Dean of the Graduate School an endorsement of his candidacy by the Director of Graduate Studies in his major department.

TIME LIMITS FOR COMPLETION OF THE MASTER OF ARTS DEGREE: The candidate for the A.M. degree must complete all of his course requirements and the thesis within a period of six calendar years from the date of his initial registration. Credits earned over a longer period of time cannot be credited toward a degree.

The student who expects to complete all requirements for the A.M. degree in the Summer Session must file with the Dean of the Graduate School, during the first week of the term when he expects to complete the work, a statement of his intention.

THE THESIS FOR THE MASTER OF ARTS DEGREE: The thesis for the A.M. degree should demonstrate the student's ability to collect, arrange, interpret, or report pertinent material on his special research problem. Although a publishable document is not required,

the thesis must be written in a literate style, and should exhibit the student's competence in scholarly methods and procedures.

REGULATIONS AND PROCEDURES: On or before July 1 of the summer in which it is expected the degree will be conferred, the student must file with the Dean of the Graduate School, on the official blank provided for that purpose, the final title of the thesis.

Four bound, typewritten copies of the thesis must be submitted, in approved form, to the Dean of the Graduate School at least one week before the date of the thesis examination. The copies will then be distributed to the several members of the examining committee.

THE EXAMINING COMMITTEE AND THE EXAMINATION: After consultation with the professor who has directed the thesis, the Dean of the Graduate School appoints an examining committee composed of the director of the thesis and two other members of the Graduate Faculty. The candidate appears before this committee for examination, which usually is restricted to the thesis and to the major field, and lasts for about one and one-half hours.

If the candidate successfully stands his examination, the examining committee certifies to his passing by signing the title page of the thesis. The candidate then returns the original and one carbon copy of the thesis to the Dean of the Graduate School, who deposits them in the University Library.

Requirements for the Master of Education Degree

PREREQUISITES: The degree of Master of Education is granted ordinarily only to teachers or to others engaged in educational work.

Before a student is admitted to graduate study for this degree, he should have completed, on the undergraduate level, a minimum of 18 semester hours of approved work in Education, including courses in Educational Psychology, and courses in the History of Education, Educational Sociology, or School Administration.

Early in the program of his work, the student must pass successfully two examinations: (1) a test of general ability, and (2) a test designed to determine his ability to write acceptable English. The student, before the degree is conferred, must also present evidence testifying to at least two years of teaching experience, gained either before his admission to course work, or concurrently with it.

REQUIREMENTS FOR THE DEGREE: The M.Ed. degree may be earned either with or without the presentation of a thesis.

WITHOUT THESIS: Students who elect this plan must present a total of 30 semester hours. Twelve hours of this required work must include the *four* basic courses: Education 204, 210, 217, and 235. If a student, by examination, can demonstrate his competency in the subject matter of two of these courses, he may be granted exemp-

tion from the required work in these courses. In no case may he claim exemption for more than two.

Other requirements are: a departmental major (i.e., in Nursing Education, Elementary Education, Public School Administration, Public School Supervision, or Secondary Education) of at least 12 semester hours, and a minor of at least 6 semester hours in a department other than Education. Toward the end of his residence the student must pass a comprehensive examination on his departmental major and on the content of the four basic courses. Permission to take such examinations must be obtained from the Director of Graduate Studies of the Department of Education, and a notice of intention must be filed with him at least three weeks before the announced dates of the examinations.

WITH THESIS: Students who elect this plan are permitted to substitute a thesis for 6 semester hours of the required course work. The student must present a thesis subject approved by the Professor of Education who intends to direct it, and by two other members of the staff in Education, including the Director of Graduate Studies. Two of the three members of the approving committee must be permanent members of the Duke University Graduate Faculty. The title of the thesis must be filed with the Dean of the Graduate School at the same time as the titles for the A.M. theses (see p. 36).

In addition to the thesis, the student must present 24 semester hours of course credit. Of these, 6 semester hours must be earned in *two* of the basic courses in the Department; Education 204, 210, 217, or 235. Of the remaining 18 semester hours, 6 semester hours must constitute a minor taken outside of the Department of Education; at least 12 semester hours must be taken in the student's departmental major.

The regulations regarding submission of typed copies of the thesis and the thesis examination are the same as those for the A.M. degree (see p. 36).

CANDIDACY FOR THE MASTER OF EDUCATION DEGREE: After a student who has been officially admitted to the Graduate School has completed the initial 12 semester hours of graduate course work, he may apply for candidacy for the M.Ed. degree. Two conditions must have been met: (1) he must have made passing marks on all of his course work and have made a grade of "G" or "E" on at least three semester hours of this work; and (2) he must present to the Dean of the Graduate School an endorsement of his candidacy by the Director of Graduate Studies in his major department.

TIME LIMITS FOR COMPLETION OF THE MASTER OF EDUCATION DEGREE: The candidate for the M.Ed. degree must complete all of his course requirements and the thesis within a period of six calendar years from the date of his initial registration. Credits

earned over a longer period of time cannot be credited toward a degree.

The student who expects to complete all requirements for the M.Ed. degree in the Summer Session must file with the Dean of the Graduate School, during the first week of the term when he expects to complete the work, a statement of his intention.

(See note under Education, p. 44.)

Requirements for the Master of Arts in Teaching Degree

PREREQUISITES: The degree of Master of Arts in Teaching is designed for both recent graduates of Liberal Arts colleges who wish to enter public school teaching and teachers already in service.

A student should normally have completed a minimum of 12 semester hours in his proposed major subject and an additional 12 semester hours in that or related subjects. In the event that a student wishes to undertake a graduate major different from the undergraduate major, the prerequisites are possible of modification upon the recommendation of the student's committee and the approval of the Dean of the Graduate School.

PROGRAMS FOR THE DEGREE: One of two programs may be arranged, in consultation with the student's committee: (1) A major in Education of 18 to 24 semester hours and 6 to 12 semester hours in non-education courses. (2) A major in non-education courses of 18 to 24 semester hours and 6 to 12 semester hours in education. In both programs a minimum of 30 semester hours is required.

The non-education courses are to be taken in one or more subjects ordinarily taught in the secondary schools. The amount and distribution of this work will be determined by the needs of the individual student.

The Master of Arts in Teaching may be earned with or without the presentation of a thesis. If a student, in consultation with his committee, elects to present a thesis, 6 semester hours of the total of 30 semester hours required will be allotted to thesis research. He will then be required to complete 24 semester hours of course credits. The regulations concerning the writing and submission of the thesis, and the examination of it, are the same as those governing the thesis for other masters' degrees offered in the Graduate School.

THE COMMITTEE: Each candidate for the degree will be assigned a committee, appointed by the Dean of the Graduate School, to plan his program of study.

This committee will consist of three members, at least one of whom will be from the Department of Education, and at least one from another department. The chairman of the committee will normally be chosen from the department of the major.

School of Nursing



BOTH the Diploma and Degree programs of the School of Nursing include courses in the Summer Session. Persons desiring degree credit for either of these programs must be regularly admitted to the School of Nursing. All persons who seek enrollment in the School of Nursing must have their program approved in the office of the School of Nursing. Students admitted with Advance Standing to the School of Nursing may make up deficiencies in their previous programs as approved by the School of Nursing. Information about summer courses and costs is published in the regular Bulletin of the School of Nursing. For further information write to the Dean of the School of Nursing, Hanes House, Duke University, Durham, North Carolina.

Divinity School Studies



BACHELOR OF DIVINITY AND MASTER OF RELIGIOUS EDUCATION: The degrees of Bachelor of Divinity and Master of Religious Education are administered by the faculty of the Divinity School. A limited number of courses carrying credits toward these degrees is listed in this *Bulletin* under the heading of Religion. Persons desiring credit toward either of these degrees must be regularly admitted to the Divinity School, and all courses listed for Divinity School credit must be registered and approved in the office of the Divinity School. This school publishes its own Summer Session Bulletin, a copy of which may be secured by addressing The Office of the Dean, The Divinity School, Duke Station, Durham, North Carolina.

Undergraduate Study



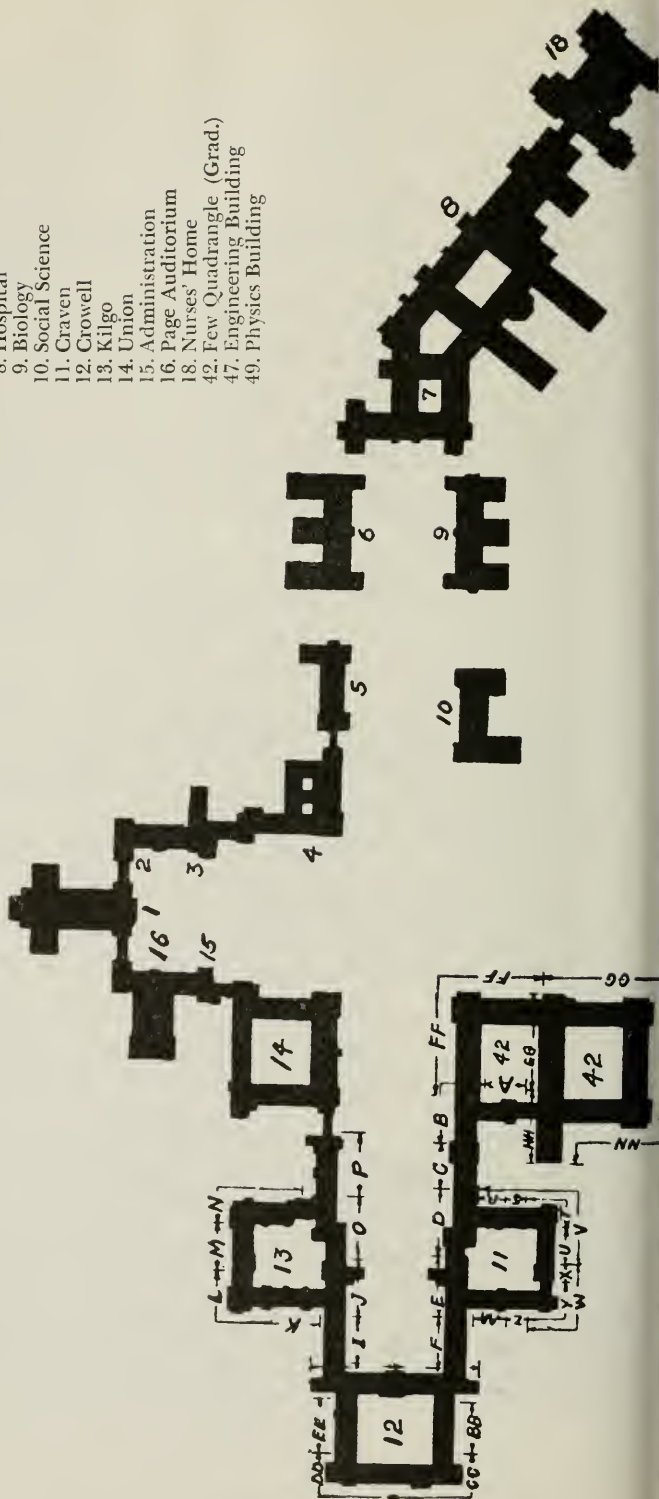
UNDERGRADUATES in Duke University who desire to accelerate their programs may complete the work for a degree in three years by attending two and one-half summer sessions.

Undergraduates from other colleges and universities may enroll for summer instruction at Duke and transfer their earned credits to their own institutions. By attending both terms of the Summer Session it is possible for a student to earn as many as twelve semester hours of credit. Instruction of interest to undergraduates will be offered in the summer of 1954 in most of the departments and colleges.

WEST CAMPUS DUKE UNIVERSITY

WEST CAMPUS BUILDINGS

1. Chapel
2. Gray
3. Divinity School
4. Library
5. Law School
6. Chemistry
7. Medical School
8. Hospital
9. Biology
10. Social Science
11. Craven
12. Crowell
13. Kilgo
14. Union
15. Administration
16. Page Auditorium
18. Nurses' Home
42. Few Quadrangle (Grad.)
47. Engineering Building
49. Physics Building



Courses of Instruction



Minimum Enrollment Required for Courses

ALL courses are offered subject to minimum enrollments. The University reserves the right to withdraw undergraduate courses in which fewer than twelve students enroll, senior-graduate courses numbered 200-299 in which fewer than ten students enroll, and graduate courses and seminars numbered 300 or above in which fewer than six students enroll. In withdrawing a course, the University attempts to avoid undue hardships on students. Sometimes, therefore, courses are offered in spite of small enrollments. Courses not listed will be given when a demand develops and an instructor is available.

Department Officers and Regulations

Departments offering Summer Session programs are listed alphabetically. Under each department is given the name of the chairman and the name of the director of graduate studies. Where departments have set up special regulations for admission to candidacy for the Master's degree, these are included.

Key to Room Assignments for Classes

The description of each course indicates the building and room in which the course is scheduled and the hour at which it will be given. For example: Economics S51 is scheduled as 10.208. This means Building 10, Room 208. The key to building numbers is given in the chart.

BOTANY

PROFESSOR HUGO L. BLOMQUIST, CHAIRMAN—203 BIOLOGY BUILDING (WEST CAMPUS);
PROFESSOR PAUL J. KRAMER, DIRECTOR OF GRADUATE STUDIES—
04 BIOLOGY BUILDING (WEST CAMPUS)

For admission to candidacy for the Master's degree in Botany, students must have completed a minimum of eighteen semester hours of biological science, including six semester hours of botany in courses numbered above 100. Students who have not yet had the minimum eighteen hours, however, may enter higher courses by permission of the instructor, if he is convinced that they can carry the work for undergraduate credit, and may count such work toward the eighteen hours necessary for candidacy.

FIRST TERM

S225. SPECIAL PROBLEMS.—Hours to be arranged. STAFF

S359. RESEARCH.—Hours to be arranged. STAFF

SECOND TERM

S225. SPECIAL PROBLEMS.—Hours to be arranged. STAFF

S359. RESEARCH.—Hours to be arranged. STAFF

SECOND TERM (Marine Laboratory at Beaufort, North Carolina)

S212. COASTAL AQUATIC VEGETATION.—A study of coastal vegetation with emphasis on aquatic vascular plants and algae inhabiting coastal areas as well as freshwater habitats in the outer Coastal Plain. Prerequisites, one year of botany or equivalent. 6 s.h. MR. BLOMQUIST

S359. RESEARCH.—Hours to be arranged. MR. BLOMQUIST

CHEMISTRY

PROFESSOR MARCUS E. HOBBS, CHAIRMAN—022 CHEMISTRY BUILDING (WEST CAMPUS);

PROFESSOR WARREN C. VOSBURGH, DIRECTOR OF GRADUATE STUDIES—

211 CHEMISTRY BUILDING (WEST CAMPUS)

All classes in Chemistry, Term I, will begin on June 22 and continue through July 17. All classes in Chemistry, Term II, will begin on July 21 and continue through August 14. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* on Page 19 of this *Bulletin*.

A course in chemistry constitutes a student's full program and occupies his entire time during each school day.

FIRST TERM

S1. GENERAL INORGANIC CHEMISTRY.—Lectures, recitations, and laboratory work on the elementary principles of chemistry and on the occurrence, preparation, properties, and uses of the elements and their compounds. Recitation daily, 8:00-9:00, 6.112; laboratory daily, 9:00-12:00, 6.108; lecture daily, 12:00-1:00, 6.116. 4 s.h. MR. WILDER

S61. FUNDAMENTALS OF ANALYTICAL CHEMISTRY.—A study of the relations of electrolytes in solution and of chemical equilibrium illustrated by laboratory experiments involving the techniques of gravimetric, volumetric, and colorimetric analysis. Prerequisites: Chemistry 1-2 and Mathematics 6 or equivalent. Lecture or recitation daily, 8:30-10:00, 6.122; laboratory daily, 11:00-12:30 and 2:00-5:00, 6.208. 4 s.h. MR. SAYLOR

S151. ORGANIC CHEMISTRY.—An introduction to the study of carbon compounds. Compounds of the aliphatic series form the basis of lectures, discussions and laboratory experiments. Prerequisite: Chemistry S61. Recitation daily, 8:00-9:00, 6.01; laboratory daily, 9:00-12:00, 6.301; lecture daily, 12:00-1:00, 6.01. 4 s.h. MISS BROWN

S275. THESIS RESEARCH.—Research in the fields of physical, analytical, inorganic, or organic chemistry. Open to those students whose research programs for the A.M. and Ph.D. degrees have been approved by the department and by one of the instructors in charge of the course. Schedule to be arranged. (Not more than one semester hour of credit per week for full-time schedule or one semester hour each two weeks for half-time schedule.) 2 to 8 s.h. STAFF

SECOND TERM

S2. GENERAL INORGANIC CHEMISTRY.—A continuation of S1. Prerequisite: Chemistry S1. Recitation daily, 8:00-9:00, 6.112; laboratory daily, 9:00-12:00, 6.108; lecture daily, 12:00-1:00, 6.116. 4 s.h. MR. STROBEL

S152. ORGANIC CHEMISTRY.—A study of compounds of the aromatic series and of carbohydrates and proteins. Prerequisite: Chemistry S151. Recitation daily, 8:00-9:00, 6.01; laboratory daily, 9:00-12:00, 6.301; lecture daily, 12:00-1:00, 6.01. 4 s.h. MR. BRADSHER

ECONOMICS

PROFESSOR CALVIN B. HOOVER, CHAIRMAN; PROFESSOR FRANK T. DEVYVER, EXECUTIVE
OFFICER OF THE DEPARTMENT—203H SOCIAL SCIENCE BUILDING (WEST CAMPUS);
PROFESSOR JOSEPH J. SPENGLER, DIRECTOR OF GRADUATE STUDIES—322
LIBRARY BUILDING (WEST CAMPUS)

FIRST TERM

S51. PRINCIPLES OF ECONOMICS.—A short course in the essential principles of economic science. (This course will not count as a part of the minimum economics requirements for graduation until the equivalent of S52 has been completed. Credit for Ec. S51 will not be given until Ec. S52 has been completed.) 10.208. 7:40-9:00. 3 s.h. MR. MCKENZIE

S52. PRINCIPLES OF ECONOMICS.—A continuation of Economics S51, emphasis on economic problems. 10.209. 11:00-12:20. 3 s.h. MR. MCKENZIE

S105. INDUSTRIAL MANAGEMENT.—A study of the organization and management of industrial production, with emphasis upon the principles governing location and plant design, the planning and control of materials and methods, and general price policies. 10.208. 11:00-12:20. 3 s.h. MR. JOERG

S115. ECONOMIC GEOGRAPHY: TEACHERS' COURSE.—A study of the interrelation of human activities and environmental elements. The discussion embraces location, maps and their interpretation, the major climatic regions, seasonal influences, weather, lands and their uses, soils and minerals, bodies of water, plants, animals, and the works of man, as environmental factors. B113. 9:20-10:40. 3 s.h. MR. LEMERT

S118. ECONOMIC GEOGRAPHY OF THE SOUTH.—A study of the agricultural, commercial, and industrial development, with special emphasis upon the expansion of Piedmont industries. B113. 11:00-12:20. 3 s.h. MR. LEMERT

S143. CORPORATION FINANCE.—Principles and problems in the financial organization of corporations; the study of corporate securities, the management of capital, the distribution of earnings; industrial combinations; insolvency and reorganization. (Though not a prerequisite, Economics 57-58, Principles of Accounting, or Economics 60, General Accounting, are recommended to students electing this course). 10.210. 9:20-10:40. 3 s.h. MR. JOERG

S171. ADVANCED ACCOUNTING.—Advanced accounting theory and practice applied to the managerial problems of valuation and operation in corporations, consolidations, mergers, and liquidations. Open to students who have completed Accounting 57-58. June 9-June 28. 10.212. 7:40-12:20. 3 s.h. MR. MANN

S172. ADVANCED ACCOUNTING.—A continuation of Economics S171. June 29-July 17. 10.212. 7:40-12:20. 3 s.h. MR. MANN

S231. THE ECONOMIC HISTORY OF EUROPE.—The economic development of Europe from medieval times to the present, treating such topics as the guilds, mercantilism, money, banking, crises, the Industrial Revolution, and interrelations of government and business, and the economic consequences of war. 10.209. 9:20-10:40. 3 s.h. MR. SMITH

S286. LATIN-AMERICAN ECONOMICS.—Facts and factors in the economic structure and growth of the Latin-American nations; population, labor productivity, and standards of living; problems of industry, agriculture, and mining; transportation and public utilities; monetary and fiscal policies; the migration of capital; economic thought and institutions. 10.209. 7:40-9:00. 3 s.h. MR. SMITH

S318X. THESIS SEMINAR.—Hours to be arranged.

MR. SMITH

SECOND TERM

S51. PRINCIPLES OF ECONOMICS.—A short course in the essential principles of economic science. (This course will not count as a part of the minimum economics requirements for graduation until the equivalent of S52 has been completed. Credit for Ec. S51 will not be given until Ec. 52 has been completed.) 10.209. 11:00-12:20. 3 s.h.

MR. DEWEY

S52. PRINCIPLES OF ECONOMICS.—A continuation of Economics S51, emphasis on economic problems. 10.209. 7:40-9:00. 3 s.h.

MR. DEWEY

S155. LABOR PROBLEMS.—An examination of present-day labor problems followed by an intensive study of methods used by employers and workers in meeting those problems. 10.204. 7:40-9:00. 3 s.h.

MR. CARTTER

S181. BUSINESS LAW.—The fundamental principles of law as applied to routine business transactions. The topics presented are: contracts, negotiable instruments, forms of business organizations. *For seniors.* July 20-August 6. 10.212. 7:40-10:40. 3 s.h.

MR. DICKENS

S182. BUSINESS LAW.—A continuation of S181. The topics presented are: agency, bailments, sales and related principles. *For seniors.* Prerequisites: Economics S181. August 9-August 27. 10.212. 7:40-10:40. 3 s.h.

MR. DICKENS

S257. DYNAMICS OF THE LABOR MOVEMENT.—A study of the forces which have shaped the growth of the labor movement. Special emphasis on the origin of modern trade unionism, relating its growth with Western philosophic developments, and with the changing economic and social structure of society in Europe and America. 4.324H. 11:00-12:20. 3 s.h.

MR. CARTTER

S318X. THESIS SEMINAR.—Hours to be arranged.

MR. CARTTER

EDUCATION

PROFESSOR WILLIAM H. CARTWRIGHT, CHAIRMAN—1C WEST DUKE BUILDING (EAST CAMPUS);
PROFESSOR EDWARD C. BOLMEIER, DIRECTOR OF GRADUATE STUDIES—
1C WEST DUKE (EAST CAMPUS)

For admission to candidacy for the Master of Arts (A.M.) degree with major in Education, or for the Master of Education (M.Ed.) degree, students must, in addition to meeting the general requirements for admission to the Graduate School, meet the following specific requirements: Credit for (1) eighteen semester hours of acceptable prior work in Education and (2) twelve semester hours of acceptable prior work in a minor field. If Psychology, Sociology, Economics, or Political Science is chosen for the minor, six semester hours of work completed after entering the Junior year in college will be accepted.

The degree of Master of Arts is available in the divisions of Public School Administration, Public School Supervision, Secondary Education, Elementary Education and Educational Psychology. Every candidate for the Master of Arts degree in the Department should elect at least twelve semester hours in one of these divisions in which he plans to write his thesis and the remainder of his work, including the six semester hours in his minor, with the approval of the proper division adviser. The degree of Master of Education is available in the divisions of Public School Administration, Public School Supervision, Secondary Education, and Elementary Education. Dr. Bolmeier and Dr. Stumpf are advisers to students in School Administration and in Supervision; Dr. Carr, Dr. Petty, and Dr. Rudisill are advisers in Elementary Education; Dr. Bolmeier, Dr. Cartwright and Professor Childs are advisers in Secondary Education; and Dr. Weitz is adviser in Educational Psychology. Candidates for the Master of Arts, Master of Education, or Master of Arts in Teaching degree should read with special care the regulations of the Graduate School as set forth on pages 34-38.

Note on the four courses required for the Master of Education Degree: In the summer of 1955 Education S210 and S217 will not be offered.

FIRST TERM

S84. SOCIAL FOUNDATIONS OF EDUCATION.—Survey of the place and function of education and an understanding of the school as a social institution. 2.101. 9:20-10:40. 3 s.h. Mr. STUMPF

S88. EDUCATIONAL PSYCHOLOGY: LEARNING AND MEASUREMENT.—This course and Education 118 constitute a general introduction to the field of Educational Psychology. This course deals with (1) the psychology of learning, including: the nature of the learning process, general principles or laws of learning, the course of learning and forgetting, factors influencing efficiency in learning and retention and the transfer of training; and (2) measurement, including: the basic concepts in the measurement of intelligence, standardized achievement tests, the extent and significance of individual differences in ability and performance. Opportunity will be afforded for examination and study of a variety of tests of intelligence and achievement. MESSRS. EASLEY AND COLVER

S88.1. 10.110. 7:40-9:00. 3 s.h.

S88.2. 10:210. 7:40-9:00. 3 s.h.

S201. TEACHING AND SUPERVISION OF ARITHMETIC.—This course gives special attention to the number system, the fundamental operations (with whole numbers, fractions, and decimals), percentage and measurements. The course will consider the meaning theory, methods of teaching, problem solving, evaluation, practice and drill, and selection and gradation of arithmetical contents. The course is designed for teachers and supervisors in the elementary school. 10.204. 7:40-9:00. 3 s.h. Mr. PETTY

S204. THE SCHOOL AS AN INSTITUTION.—The place of the school in society, its history and philosophy. Selected problems guiding the reading of students will be discussed in class. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 10.205. 7:40-9:00. 3 s.h. Mr. BOLMEIER

S205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION.—A consideration of the aims and objectives of secondary school subjects, emphasizing practical problems of curriculum-making in the high school. 2.201G. 9:20-10:40. 3 s.h. Mr. CHILDS

S210. INTRODUCTION TO EDUCATIONAL RESEARCH.—The general purpose of this course is to give the student an overview of research, acquaint him with the nature of research processes, and develop within him an appreciation of the essential characteristics of good research. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 2.301. 11:00-12:20. 3 s.h. Mr. STUMPF

S211. THE PROBLEM CHILD (also Psychology S211).—Study of problem behavior and adjustment in children with emphasis on the causes and treatment of conduct and neurotic disorders of the maladjusted child. Particular attention will be paid to mental hygiene principles in the handling of problem children in school and home. 2.105. 9:20-10:40. 3 s.h. Mr. BORSTELMANN
(See also Psychology S232, PSYCHOLOGY OF THE PHYSICALLY HANDICAPPED, p. 56.)

S226. TEACHING READING IN THE ELEMENTARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. The course provides practice with elementary-school children suffering reading retardation, including testing, diagnosis, and daily remedial teaching during the six-week period. A.2F. 9:20-10:40. 3 s.h. Miss RUDISILL

S236. TEACHING READING IN THE SECONDARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. The course provides practice with secondary-school

children suffering reading retardation, including testing, diagnosis, and daily remedial teaching during the six-week period. For secondary-school teachers of all subjects who wish to improve the reading and study habits of their students. A.2F. 11:00-12:20. 3 s.h. Miss RUDISILL

S246. THE TEACHING OF MATHEMATICS.—This course deals with such topics as aims, curriculum, course and lesson planning, and classroom procedure for teaching secondary-school mathematics. 6.112. 11:00-12:20. 3 s.h. Mr. REYNOLDS

S253. SCHOOL LAW.—The primary purpose of this course is to familiarize prospective school administrators and teachers with the legal features of school organization and administration. Although some attention is given to constitutional and statutory provisions, the main emphasis is upon court decisions relating to education. Students are expected to select appropriate problems in school law for intensive study. 3.106. 9:20-10:40. 3 s.h. Mr. BOLMEIER

S267. THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL.—This course deals with such topics as aims and values, curriculum materials, classroom procedures, lesson planning, and grade placement for science teaching in the elementary school. 10.208. 9:20-10:40. 3 s.h. Mr. REYNOLDS

Thesis research credits are offered in either term by those members of the graduate staff of Duke University who are in residence. For this seminar work either three or six semester hours of credits are given, depending upon the student's period of residence and the work accomplished. Hours are to be arranged by the students and professors concerned. Thesis seminars offered are as follows:

S300X. THESIS SEMINAR IN PUBLIC SCHOOL ADMINISTRATION.

S317X. THESIS SEMINAR IN EDUCATIONAL PSYCHOLOGY.

S334X. THESIS SEMINAR IN SECONDARY EDUCATION.

S337X. THESIS SEMINAR IN ELEMENTARY EDUCATION.

S372X. THESIS SEMINAR IN PUBLIC SCHOOL SUPERVISION.

SECOND TERM

S118. EDUCATIONAL PSYCHOLOGY: PSYCHOLOGICAL DEVELOPMENT.—This course traces the psychological development of the individual from infancy to maturity. The principal topics considered are: the interdependence of hereditary and environmental factors in development, the nature of the developmental process, the establishment of the early basic patterns of behavior, changes and conditions producing these changes throughout childhood and adolescence to maturity, and the origin and treatment of minor behavior disorders. To the degree practicable, students will observe children in typical and atypical situations as a means of securing concrete data on the problems treated in the course. Not open to students who have had Psychology 121 or 126. Prerequisite: three semester hours in psychology or educational psychology. 3.201. 7:40-9:00. 3 s.h. Mr. COLVER

S217. THE PSYCHOLOGICAL PRINCIPLES OF EDUCATION.—An advanced study of teaching, learning, and the learner. Selected problems guiding the reading of students will be discussed in class. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 3.205. 7:40-9:00. 3 s.h. Mr. WEITZ

S224. TEACHING THE SOCIAL STUDIES IN ELEMENTARY SCHOOLS.—This course will treat objectives, curriculum trends, methods, and materials in elementary-school social studies. Topics to receive emphasis include unit-planning, use of the textbook, the reading program, using community resources, audio-visual materials, dealing with controversial issues, teaching time and place concepts, and evaluation. Opportunity will be provided for teachers to work on their own school problems in the social studies. 3.201. 9:20-10:40. 3 s.h. Mr. CARTWRIGHT

S235. THE NATURE, FUNCTION AND ORGANIZATION OF THE CURRICULUM.—A study of the fundamental bases for the curriculum, how the curriculum functions in the school program, and the techniques of curriculum construction. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 3.201. 11:00-12:20. 3 s.h.

MR. CARTWRIGHT

S255. GUIDANCE FUNCTIONS OF THE CLASSROOM TEACHER.—A consideration of the philosophy, methods and tools of guidance appropriate to the classroom teacher. This course is designed for students who do not plan to become guidance specialists, but who wish to apply the principles and techniques of guidance. Prerequisites: twelve hours in either education, or psychology, or a combination of the two. 3.205. 9:20-10:40. 3 s.h.

MR. WEITZ

For information regarding thesis seminar credits, see Term I.

NURSING EDUCATION

A DIVISION OF THE DEPARTMENT OF EDUCATION

MISS THELMA INGLES, R.N., DIRECTOR OF THE DIVISION OF
NURSING EDUCATION, HANES HOUSE

FIRST TERM

S120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. Hours to be arranged. 3 s.h.

MISSSES ZUKOWSKI, TILLEY

S129N. THE PSYCHOLOGICAL ASPECTS OF NURSING CARE.—This course is designed to help the student better understand how patients feel and why they may behave as they do. Special consideration will be given to problems such as resistance to treatment, lack of desire to get well, discouragement, and suspicion. The student may try new techniques in the Duke Hospital setting, if she so desires. 6.03. 9:20-10:40. 3 s.h.

MISS ZUKOWSKI

S136N. SEMINAR IN MEDICAL OR SURGICAL SPECIALTY.—Directed study in a medical or surgical specialty. Each student works on a problem of major interest to her—such as care of the patient with cancer or care of the patient with heart disease. Individual research in the collection of original material. 6.112. 9:20-10:40. 3 s.h.

MISS INGLES

S193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better understand their function in planning and managing a program in a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel and a more adequate teaching program for students and others. 6.03. 11:00-12:20

MISS INGLES

SECOND TERM

S84N. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—A special section of Education 84, applied to Nursing Education. A survey of major historical, philosophical, and sociological factors which have affected developments in nursing and nursing education. The purpose of the course is to give the student a better understanding of the place of nursing in present day society and the responsibilities of the individual nurse toward that society. Hanes House. 7:40-9:00. 3 s.h.

MISS RAPPAPORT

S120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. Hours to be arranged. 3 s.h.

MISSSES ZUKOWSKI, TILLEY

S193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better understand their functions in planning and managing a program in a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel and a more adequate teaching program for students and others. 6.03. July 20-August 10. 9:20-10:40 and 11:00-12:20. 3 s.h.

MISS INGLES

S195N. PERSONNEL WORK IN SCHOOLS OF NURSING.—The primary purpose of this course is to help nurses and supervisors to develop greater understanding of the principles of human behavior and greater ability to apply these principles in working with patients and others in hospital divisions and in establishing cooperative relationships with other departments of the hospital. Hanes House. 9:20-10:40. 3 s.h. MISS JACOBANSKY

ENGINEERING

PROFESSOR WALTER J. SEELEY, DEAN OF THE COLLEGE OF ENGINEERING
131 ENGINEERING BUILDING

C.E.S110. PLANE SURVEYING.—Use of instruments; transit, stadia, and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisite: trigonometry; engineering drawing desirable. (Four weeks, eight hours a day.) June 10-July 7. 47.117. 4 s.h. (See Forestry.) MR. THARP

SPECIAL NOTICE.—It is anticipated that undergraduate course offerings of common interest to students in all branches of engineering will be announced in a circular to be issued March 1, 1954. Requests for information should be addressed to the Dean of the College of Engineering or to the Director of the Summer Session, Duke University, Durham, North Carolina.

ENGLISH

PROFESSOR WILLIAM H. IRVING, CHAIRMAN—2G-5 WEST DUKE BUILDING (EAST CAMPUS);
PROFESSOR PAULL F. BAUM, DIRECTOR OF GRADUATE STUDIES—
402 LIBRARY (WEST CAMPUS)

Candidates for the Master's degree in English are expected to have had at least twelve semester hours in undergraduate courses above the Sophomore level. The Department may also require additional courses if the work of the student in his first term indicates inadequate preparation.

Master's candidates in English are required to elect S203. Those who have completed as many as twelve semester hours of graduate work should take also the bibliography course, S301, or its equivalent, at their earliest opportunity.

FIRST TERM

S1. ENGLISH COMPOSITION.—A course in the fundamentals of English Composition, oral and written, with special attention to sentence structure, syntax, common errors, etc. Frequent themes. 47.140. 9:20-10:40. 3 s.h. MR. HARWELL

S2. ENGLISH COMPOSITION.—A continuation of course S1. 47.140. 11:00-12:20. 3 s.h. MR. HARWELL

S55. REPRESENTATIVE WRITERS.—Chaucer's Prologue to *The Canterbury Tales* and at least two tales, Shakespeare's *I Henry IV* and *King Lear* and one other play, the *English Bible* (selections), Milton's *Paradise Lost* (selections) and some of the shorter poems. 10.110. 9:20-10:40. 3 s.h. MR. PATTON

S125. ENGLISH LITERATURE, 1789-1832.—The course begins with selections from the poetry of the forerunners of Romanticism. The chief emphasis is on the work of the older Romantics: Blake, Burns, Wordsworth, Coleridge, Lamb, and Hazlitt. Tests and short reports. 10.110. 11:00-12:20. 3 s.h. MR. PATTON

S151. ESSENTIALS OF PUBLIC SPEAKING.—A basic course in public speaking designed to give the student the poise and confidence necessary to think and speak freely before an audience. Particular attention is paid to the gathering and organization of materials and to oral presentation. 3.08. 11:00-12:20. 3 s.h. MISS SCHWERMANN

S203. CHAUCER.—The principal Canterbury Tales; reading and interpretation of the text. A reading report or a term paper. 49.132. 7:40-9:00. 3 s.h.

MR. KOTTLER

S231. EMERSON.—A study of Emerson's ideas as reflected in selected examples of his essays and poems. 10.215. 9:20-10:40. 3 s.h.

MR. GOHDES

S308X. SEMINAR IN AMERICAN LITERATURE.—For students writing theses in American Literature. Hours and credits to be arranged.

MR. GOHDES

SECOND TERM

S2. ENGLISH COMPOSITION.—A continuation of course S1. 2.205. 9:20-10:40. 3 s.h.

MR. LANE

S56. REPRESENTATIVE WRITERS.—Pope's *Poems* (selections), Smollett's *Humphrey Clinker*, Keats's *Poems and Letters*, Thackeray's *Vanity Fair*, Shaw's *Saint Joan* and *Caesar and Cleopatra*, Yeats's *Collected Poems* (selections), and a twentieth-century novel. 2.102. 7:40-9:00. 3 s.h.

MR. LANE

S131. ENGLISH LITERATURE, 1832-1900.—A study of the chief English writers of poetry, prose, and drama from Carlyle to Yeats. The major writers studied in the first semester are Carlyle, Tennyson, Browning, Macaulay, Mill, Newman, and Arnold. Collateral reading from novels of the period. Lectures, discussions, tests, and a term paper. 2.102. 9:20-10:40. 3 s.h.

MR. BEVINGTON

S134. CONTEMPORARY POETRY.—A reading course in the poetry of the twentieth century in England, Ireland, and America, beginning with Gerard Manley Hopkins and William Butler Yeats. An anthology of modern poetry is read and discussed, supplemented by the wider reading of individual poets. Informal lectures and discussions with a critical paper for the term. Open to juniors and seniors, and occasionally to sophomores by special permission. 2.105. 7:40-9:00. 3 s.h.

MRS. BEVINGTON

S137. AMERICAN LITERATURE.—A survey of American Literature from Colonial times to the present. Selections from the works of important authors are read, from Cotton Mather to Eugene O'Neill, and whole novels by Hawthorne, Melville, James, Howells, and others. The work of this course ends with the Civil War period. Lectures, tests, and a term paper. 2.105. 11:00-12:20. 3 s.h.

MR. TURNER

S215. THE ELIZABETHAN DRAMATISTS (other than Shakespeare).—Selected authors. Study of some plays, rapid reading of others. Term paper. 2.105. 1:40-3:00. 3 s.h.

MR. GILBERT

S274. AMERICAN HUMOR.—The development of the native tradition in the Down-East humorists and the humorists of the Old Southwest. Extensive reading in Mark Twain and his contemporaries, and some attention to the continuation of the tradition after Mark Twain. 2.105. 9:20-10:40. 3 s.h.

MR. TURNER

S350X. SEMINAR IN ENGLISH LITERATURE.—For students writing theses in English Literature. Hours and credits to be arranged.

MR. GILBERT

FORESTRY

PROFESSOR CLARENCE F. KORSTIAN, DEAN OF THE SCHOOL OF FORESTRY AND DIRECTOR OF GRADUATE STUDIES—308 SOCIAL SCIENCE BUILDING

Organized course work in the School of Forestry during the Summer Session is limited to plane surveying, forest surveying, tree identification, and forest mensuration which are required of all students entering upon two years of study in technical forestry leading to the degree of Master of Forestry (M.F.)

Qualified students may engage in thesis research in certain branches of forestry during the Summer Session with the approval of the instructor concerned and the Dean of the School of Forestry or of the Director of Graduate Studies in the case of work taken through the Graduate School.

C.E. S110. PLANE SURVEYING.—Use of instruments; transit, stadia, and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisites: trigonometry; engineering drawing desirable. (Four weeks, eight hours a day.) June 10-July 7. 47.117. 4 s.h. MR. THARP

S149. FOREST TREE IDENTIFICATION.—Field studies leading to the identification of trees and principal shrubs indigenous to the Piedmont and coastal plain forests of the Southeastern United States. (One week, eight hours a day.) July 8-July 14. 9.101. 1 s.h. MR. HARRAR

S150. FOREST SURVEYING.—Application of plane surveying to forest problems; practice in making boundary, topographical and cover type surveys of forested tracts, using both intensive and extensive methods; forest mapping and surveying using aerial photos. Work includes use of transit, level, plane table, traverse board, topographic abney, slope tape, aneroid barometer, staff compass, and aerial photo interpretation equipment. Prerequisites: Civil Engineering, S110 Plane Surveying; Forestry S149, Forest-Tree Identification, or equivalents. (Four weeks, eight hours a day.) July 15-August 11. 10.322. 4 s.h. MR. CHAIKEN

S151. FOREST MENSURATION.—Field studies in methods of measuring content and growth of trees and forest stands; practice in timber estimating, log scaling, use of mensurational instruments, and collection of basic data. (Four weeks, eight hours a day.) August 12-September 8. 9.101. 4 s.h. MR. SCHUMACHER

S357. RESEARCH IN FORESTRY.—Open to students whose research programs for the M.F. or D.F. degree have been approved by the Dean of the School of Forestry and the instructor responsible for directing the research and whose programs for the A.M. or Ph.D. degree have been approved by the Director of Graduate Studies and the instructor in charge. (Credits and schedule to be arranged.) June 9-August 27. 2 to 12 s.h. (Not more than one semester hour of credit per week for full time schedule or one semester hour each two weeks for half-time schedule.) (Consult courses 301-302 in Announcement of School of Forestry for letter designation of branches of forestry in which research is to be conducted.) 10.308. STAFF

FRENCH

PROFESSOR B. R. JORDAN, CHAIRMAN OF THE DEPARTMENT OF ROMANCE LANGUAGES—
214 CARR BUILDING (EAST CAMPUS); PROFESSOR L. B. WALTON, DIRECTOR OF
GRADUATE STUDIES OF THE DEPARTMENT OF ROMANCE LANGUAGE—
LIBRARY 234-B (WEST CAMPUS)

FIRST TERM

S1. ELEMENTARY FRENCH.—June 9-June 28. 3.101. 7:40-9:00 and 11:00-12:20. 3 s.h. MR. GRANT

S2. ELEMENTARY FRENCH.—June 29-July 17. 3.101. 7:40-9:00 and 11:00-12:20. 3 s.h. MR. GRANT

NOTE: A student enrolled in French S2 must also attend French S1, unless French 1 has been taken during Spring Semester 1954.

S3. INTERMEDIATE FRENCH.—Standard literary texts (short story, novel, drama) are used as the basis for intensive drill on the essentials of vocabulary, idiom, and construction. Extensive oral exercises are included in the reading objective. Prerequisite: French 1-2, or two units of high school French. 2.205. 7:40-9:00. 3 s.h. MR. CORDLE

S4. INTERMEDIATE FRENCH.—Continuation of French S3. Prerequisite: French 3 or equivalent. 2.205. 11:00-12:20. 3 s.h. MR. DEMOREST

S51. INTRODUCTION TO FRENCH LITERATURE.—Selected texts in modern French literature (fiction and drama) are approached from the literary as well as the linguistic point of view. Throughout the course there is systematic oral practice based on topics within the reading assignments. Prerequisite: French 3-4, or equivalent. 3.108. 7:40-9:00. 3 s.h. MR. DEMOREST

S52. INTRODUCTION TO FRENCH LITERATURE.—Continuation of French S51. Prerequisite: French 51, or equivalent. 3.108. 11:00-12:20. 3 s.h. MR. CORDLE

GEOLOGY

PROFESSOR E. WILLARD BERRY, CHAIRMAN—019 SCIENCE (EAST CAMPUS)

All classes in Geology, Term I, will begin on June 22 and continue through July 17. All classes in Geology, Term II, will begin on July 21 and continue through August 14. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* on page 19 of this *Bulletin*.

FIRST TERM

S51. GENERAL GEOLOGY.—This course is designed to give a general view of the surface features of the earth, their origin, structure, and materials. Illustrative materials are studied in the laboratory. Excursions may be made to neighboring points where principles of the science are studied in the field. Lectures or recitations, 8:00-11:00 daily; laboratory 2:00-5:00, Monday through Thursday, June 22-July 17. 09 Science Building, East Campus. 4 s.h. MR. HERON

SECOND TERM

S52. GENERAL GEOLOGY.—This course is designed to give some knowledge of the chief events of the earth's history. Excursions may be made to suitable neighboring localities. Lectures or recitations, 8:00-11:00 daily; laboratory 2:00-5:00 Monday through Thursday, July 21-August 14. 09 Science Building, East Campus. 4 s.h. MR. HERON

GERMAN

PROFESSOR CLEMENT VOLLMER, CHAIRMAN—106A SOCIAL SCIENCE BUILDING
(WEST CAMPUS)

FIRST TERM

S1. ELEMENTARY GERMAN.—The fundamentals of grammar and pronunciation; vocabulary drill, translation, and dictation. Emphasis upon a sound reading knowledge of the language and individual achievement. June 9 to June 28. 10.106b. 9:20-10:40 and 1:40-3:00. 3 s.h. MR. MAXWELL

S2. ELEMENTARY GERMAN.—The equivalent of the second college semester of German; intensive reading of graded material; grammar and vocabulary drill; dictation and sight translation. June 29-July 17. 10.106b. 9:20-10:40 and 1:40-3:00. 3 s.h. MR. MAXWELL

NOTE: A student enrolled in German S2 must also attend German S1, unless German 1 has been taken during Spring Semester 1954.

S3. INTERMEDIATE GERMAN.—Grammar and composition; dictation, spoken German; reading of narrative and dramatic prose. 10.106b. 7:40-9:00. 3 s.h. MR. WILSON

S4. INTERMEDIATE GERMAN.—Grammar and composition; dictation, spoken German; reading of narrative and dramatic prose. Prerequisite: German S3. 10.106b. 11:00-12:20. 3 s.h. MR. WILSON

GREEK

ASSOCIATE PROFESSOR JAMES N. TRUESDALE, CHAIRMAN—303 GRAY (WEST CAMPUS)

FIRST TERM

S121. GREEK LITERATURE: HOMER.—*Iliad and Odyssey*. The purpose of this course is to give a general survey of the life and civilization of the Greeks,

especially to those who have never studied the language but wish to become acquainted with some of the choicest portions of the literature by the use of translations. The *Iliad* and the *Odyssey* are read in translation, and the excavations and discoveries at Troy and other cities of the Aegean age are discussed.

MESSRS. TRUESDALE, ROSE

S121.1. 3.205. 7:40-9:00. 3 s.h.

S121.2. 3.106. 7:40-9:00. 3 s.h.

S122. GREEK LITERATURE: THE TRAGIC POETS.—The purpose of this course is similar to that of course S121. Many of the extant plays of Aeschylus, Sophocles, and Euripides are studied in English translations. 3.205. 9:20-10:40. 3 s.h.

MR. TRUESDALE

HEALTH AND PHYSICAL EDUCATION

E. M. CAMERON, DIRECTOR, TRINITY COLLEGE AND COLLEGE OF ENGINEERING—
109 GYMNASIUM (WEST CAMPUS)

FIRST TERM

PE S57. VOLLEYBALL-TENNIS. Gymnasium. Hours to be arranged. 1 s.h. (M)

PE S65. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.—A study of the objectives and principles upon which physical education is based. The history of physical education is studied in order to show the changes in objectives, principles and methods, and as an aid in the interpretation of trends. Open to Sophomores, Juniors, and Seniors. Gymnasium. 9:20-10:40. 3 s.h. MR. AYCOCK

PE S190. PROTECTIVE PRACTICES IN PHYSICAL EDUCATION.—Training and conditioning of athletic teams and the prevention, diagnosis, and treatment of athletic injuries. Gymnasium. 1:40-3:00. 3 s.h.

MR. MONTFORT

HISTORY

PROFESSOR CHARLES S. SYDNOR, CHAIRMAN—101 LIBRARY (WEST CAMPUS); PROFESSOR E. MALCOLM CARROLL, DIRECTOR OF GRADUATE STUDIES—
406 LIBRARY (WEST CAMPUS)

For admission to candidacy for a Master's degree in History the student must present a total of eighteen semester hours of prior work in History, of which at least six must be in American History if he plans to take his major work in that field. Before enrolling for thesis supervision, candidates for the Master's degree are required to complete at least three semester hours of seminar work and are strongly urged to enroll for this work in the second term of their attendance in the Summer Session. (See courses numbered 300 or above.)

FIRST TERM

S51. HISTORICAL BACKGROUND OF THE WORLD TODAY 1500-1871.—The central fact of the expansion of Europe underlies the content of the course. The chief themes are: the contest between liberty and authority in the modern state, changing economic theory and organization, and the problems of peace and war among the states, including the Western infiltration of Asia, Latin America, and Africa, and the rise of the United States as a world power. 2.01. 7:40-9:00. 3 s.h.

MR. HAMILTON

S63. NAVAL HISTORY AND ELEMENTARY STRATEGY.—After a review of earlier periods, attention is given to the rise of sea-power and its importance in more recent times and to naval actions, especially in the two World Wars. This course is not open to students who have N.S. 102. 2.01. 9:20-10:40. 3 s.h.

MR. ROPP

S91. THE DEVELOPMENT OF AMERICAN DEMOCRACY TO 1865.—This course is a study of trends vital to an understanding of the United States today. The main theme is the development of American democracy. Problems of foreign policy, the growth of capitalism, political practices, social behavior, and conflicting ideals are considered in relation to this main theme. 2.02. 7:40-9:00. 3 s.h.

MR. DECONDE

S122. THE FOREIGN RELATIONS OF THE UNITED STATES SINCE 1880.—This course is designed to acquaint the student with the historical development of ideas and movements that have shaped American attitudes toward the outside world and to provide an historical introduction to the formal conduct of diplomacy. 2.01. 11:00-12:20. 3 s.h.
MR. DeCONDE

S245. WAR IN THE MODERN WORLD.—The course is concerned with the relations between warfare and modern political, economic, and social conditions. The work deals with Clausewitz's theories of warfare and the period from the introduction of gunpowder to 1871. 2.101. 7:40-9:00. 3 s.h.
MR. ROPP

S265. THE WESTWARD MOVEMENT IN THE UNITED STATES TO 1840.—A study of the progress of settlement from the Atlantic to the Pacific Coast with especial attention to the transmission of culture, developments in transportation, the transition from agrarian to urban communities, the process of state making and the social, economic, and political effects of the westward march upon the United States as a whole. 2.02. 9:20-10:40. 3 s.h.
MR. STEVENS

S301. SEMINAR IN HISTORICAL RESEARCH. 2.101. 11:00-12:20 or at an hour to be arranged. 3 s.h.
MR. HAMILTON

SECOND TERM

S52. HISTORICAL BACKGROUND OF THE WORLD TODAY 1871-1940.—A continuation of History 551. 2.01. 7:40-9:00. 3 s.h.
MR. FERGUSON

S92. THE DEVELOPMENT OF AMERICAN DEMOCRACY, 1865 TO THE PRESENT.—The emphasis is on the emergence of contemporary problems. 2.02. 7:40-9:00. 3 s.h.
MR. WATSON

S268. THE TRANSITION FROM MEDIEVAL TO MODERN ENGLAND.—A study of the changes in English society and ideas from the time of Edward III to that of Elizabeth. (The second semester of this course.) 2.01. 11:00-12:20. 3 s.h.
MR. FERGUSON

S302. SEMINAR IN HISTORICAL RESEARCH. 2.02. 9:20-10:40 or at an hour to be arranged. 3 s.h.
MR. WATSON

LATIN AND ROMAN STUDIES

PROFESSOR ROBERT S. ROGERS, CHAIRMAN—204 CARR (EAST CAMPUS)

FIRST TERM

S111. ROMAN LITERATURE IN ENGLISH TRANSLATION.—Selected readings of Latin literature in English translation with emphasis on the drama, lyric poetry, and the varied contributions of Cicero to literature. 2.205. 9:20-10:40. 3 s.h.
MR. ROSE

MATHEMATICS

PROFESSOR J. J. GERGEN, CHAIRMAN—134 PHYSICS BUILDING (WEST CAMPUS); PROFESSOR J. H. ROBERTS, DIRECTOR OF GRADUATE STUDIES—230 PHYSICS BUILDING (WEST CAMPUS)

The Department offers work leading toward the degrees of Master of Arts, Master of Arts in Teaching, and Doctor of Philosophy, with major in Mathematics.

It is recommended that graduate students consult with the Director of Graduate Studies concerning their programs as early as possible.

FIRST TERM

S5. COLLEGE ALGEBRA.—Advanced topics in quadratic equations, systems involving quadratics, variation, binomial theorem, progressions, inequalities, theory of equations, determinants, partial fractions, probability. This course and Mathematics 6 may be taken concurrently. Prerequisite: Mathematics 1, or one and one-half units in algebra and one unit in geometry. 49.135. 7:40-9:00. 3 s.h.
MR. ELLIOTT

S6. PLANE TRIGONOMETRY.—Logarithms, right and oblique triangles, radian measure, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities and equations. Prerequisite: Must be preceded or accompanied by Mathematics 5. 49.135. 9:20-10:40. 3 s.h. MR. DRESSEL

S52. CALCULUS II.—Integration of elementary functions, areas, solids of revolution, length of arc, surfaces of revolution, centroids, moments of inertia, pressure. Prerequisite: Mathematics 51. 49.132. 9:20-10:40. 3 s.h. MR. ELLIOTT

S205. ALGEBRA FROM AN ADVANCED STANDPOINT.—This course is designed for teachers of secondary school mathematics. Topics considered are real and complex numbers, elementary number theory, scales of notation, Diophantine problems, continued fractions, summation of series, binomial theorem, interest and annuities. Prerequisite: Calculus. 49.138. 9:20-10:40. 3 s.h. MR. GERGEN

S239. ADVANCED CALCULUS I.—Continuity and differentiation for functions of one and several variables, Taylor's expansion with applications, definite, improper, and infinite integrals. Prerequisite: Calculus. 49.138. 7:40-9:00. 3 s.h. MR. DRESSEL

S389X. THESIS SEMINAR.—Supervision of individual theses in algebra, analysis and geometry. Students should consult with the Director of Graduate Studies before registering. Thesis credit only. Hours to be arranged. MESSRS. GERGEN AND DRESSEL

(Students interested in the teaching of high school mathematics are referred to Education S246, page 46 of this *Bulletin*.)

SECOND TERM

S50. PLANE ANALYTIC GEOMETRY.—Rectangular and polar coordinates, loci, straight lines, conic sections. This course and Mathematics 51 may be taken concurrently. Prerequisites: Mathematics 5 and 6. 49.135. 7:40-9:00. 3 s.h. STAFF

S51. CALCULUS I.—Differentiation of elementary functions, curve tracing, maxima and minima, motion, curvature, indeterminate forms. Prerequisite: Must be preceded or accompanied by Mathematics 50. 49.135. 9:20-10:40. 3 s.h. MR. CARLITZ

S53. CALCULUS III.—Introduction to solid analytic geometry, partial differentiation, multiple integrals, series, introduction to differential equations. Prerequisite: Mathematics 52. 49.132. 9:20-10:40. 3 s.h. STAFF

S240. ADVANCED CALCULUS II.—Double and triple integrals, infinite series, power series, implicit functions with applications to geometry. Prerequisite: Mathematics 239 or consent of the instructor. 49.138. 7:40-9:00. 3 s.h. MR. CARLITZ

S389X. THESIS SEMINAR.—Supervision of individual theses in algebra, analysis, and geometry. Students should consult with the Director of Graduate Studies before registering. Thesis credit only. Hours to be arranged. MR. CARLITZ

SOLID GEOMETRY

September 6-September 16, Monday-Thursday. 49.135. 8:30-11:30. 0 s.h.

MR. ELLIOTT

PHILOSOPHY

PROFESSOR GLENN NEGLEY, CHAIRMAN—3-1 WEST DUKE BUILDING (EAST CAMPUS);

PROFESSOR CHARLES A. BAYLIS, DIRECTOR OF GRADUATE STUDIES—
3-1 WEST DUKE BUILDING (EAST CAMPUS)

FIRST TERM

S49. ETHICS.—An introductory consideration of important moral problems as developed in European and American thought and culture. 3.205. 11:00-12:20. 3 s.h. MR. PEACH

S94. HISTORY OF PHILOSOPHY: MODERN.—A study of the major philosophers of the period with special reference to the continuity of their thought. 3.108. 9:20-10:40. 3 s.h. MR. PEACH

SECOND TERM

S48. LOGIC.—A study of the conditions of effective thinking and clear communication, and of typical sources of fallacies. Examination of the basic principles of deductive reasoning (making explicit the implications of statements) and of inductive reasoning (the formulation and testing of hypotheses on the basis of experience and experiment). Emphasis on practical illustrations and applications. 10.204. 11:00-12:20. 3 s.h. MR. CLARK

S91. INTRODUCTION TO PHILOSOPHY.—A systematic and historical examination of the major problems of knowledge, morals, and metaphysics. 10.204. 9:20-10:40. 3 s.h. MR. CLARK

PHYSICS

PROFESSOR WALTER M. NIELSEN, CHAIRMAN AND DIRECTOR OF GRADUATE STUDIES—
119 PHYSICS BUILDING (WEST CAMPUS)

All classes in Physics, Term I, will begin on June 15 and continue through July 17. All classes in Physics, Term II, will begin on July 21 and continue through August 20. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* on page 19 of this *Bulletin*.

FIRST TERM

S51. GENERAL PHYSICS.—This course treats the basic principle of general physics in a more quantitative manner than Physics 1-2. It is designed for Sophomores and Juniors and meets in a thorough way the physics requirements for entrance into the study of either medicine or engineering, and is well suited for the general student. A limited number of Freshmen who present physics for entrance and who have completed the required mathematics may be admitted by permission of the instructor. (Not open to students who have completed Physics 1-2). Prerequisite: Mathematics 5-6 or equivalent. Lecture and recitation daily, 8:30-9:50 and 10:10-11:30; laboratory three days per week, 1:00-4:00. 49.113. June 15-July 17. 5 s.h. MR. CARPENTER

S353X. THESIS SEMINAR.—Students who are properly qualified may carry on research work under direction. Credits and hours to be arranged. STAFF

SECOND TERM

S52. GENERAL PHYSICS.—A continuation of Physics S51. Prerequisite: Physics S51. Lecture and recitation daily, 8:30-9:50 and 10:10-11:30; laboratory three days per week, 1:00-4:00. 49.113. July 21-August 20. 5 s.h. MR. CARPENTER

S353X. THESIS SEMINAR.—For description, see First Term. STAFF

POLITICAL SCIENCE

PROFESSOR ROBERT S. RANKIN, CHAIRMAN—308 LIBRARY (WEST CAMPUS); PROFESSOR R. R. WILSON, DIRECTOR OF GRADUATE STUDIES—405 NEW LIBRARY TOWER (WEST CAMPUS)

FIRST TERM

S61. AMERICAN GOVERNMENT AND POLITICS.—A study of the American political system, emphasizing the organization and functioning of the national government. 10.107. 9:20-10:40. 3 s.h. MR. ELLIS

S121. ELEMENTS OF INTERNATIONAL RELATIONS.—Analysis of the operations of international politics, of the foundations of national power, and of international organization, with emphasis upon attempted solutions of the central problem of international security. 10.107. 7:40-9:00. 3 s.h. MR. ELLIS

S209. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES.—A study of the historical development of state and local governments, their present organization, their relation to each other and to the federal government. 10.205. 11:00-12:20. 3 s.h. MR. HOWARD

S241. ADMINISTRATIVE MANAGEMENT.—The development of scientific management, its application to government in the United States and a consideration of current problems in organization, procedure, work simplification and management improvement. 10.205. 9:20-10:40. 3 s.h. MR. HOWARD

SECOND TERM

S62. AMERICAN GOVERNMENT AND POLITICS.—A continuation of S61. For description see Term I. 10.107. 9:20-10:40. 3 s.h. MRS. CHEEK

S191. TOPICS IN LOCAL GOVERNMENT.—Problems in the general area of county and city government including the administration of government services such as education, public welfare, law enforcement; inter-governmental relationships; administrative reorganizations; methods of popular control; and the reconstruction of state and local government so as to meet present-day needs. 10.107. 7:40-9:00. 3 s.h. MRS. CHEEK

S232. JAPANESE CIVILIZATION.—Analysis of Japanese culture with reference to social and political institutions. Buddhist, Confucian, and Shinto bases of Japanese thought are examined. 10.205. 9:20-10:40. 3 s.h. MR. BRAIBANTI

S311. SEMINAR IN FAR EASTERN POLITICS.—Open to students who have completed course 211 or its equivalent. 10.205. 11:00-12:20 or at an hour to be arranged. 3 s.h. MR. BRAIBANTI

PSYCHOLOGY

PROFESSOR ELIOT H. RODNICK, CHAIRMAN—106 BIVINS BUILDING (EAST CAMPUS)

PROFESSOR KARL ZENER, DIRECTOR OF GRADUATE STUDIES—205

PSYCHOLOGY LABORATORY BUILDING (EAST CAMPUS)

For admission to candidacy for a Master's Degree in Psychology, the student must present a total of twelve semester hours in Psychology beyond the Introductory Course, at least six semester hours of which must be taken in senior-graduate courses.

Further details concerning the program of studies in Psychology may be obtained from the Director of Graduate Studies in Psychology.

FIRST TERM

S91. INTRODUCTORY PSYCHOLOGY.—An introduction to the facts, principles, and problems of normal adult psychology through a study of psychological methods as applied to motivation, emotions, perception, sensation, thinking, memory, learning, individual differences, and personality. 2.102. 9:20-10:40. 3 s.h. MR. COLLIER

S109. INTRODUCTORY SOCIAL PSYCHOLOGY.—The influence of society on personality, public opinion, propaganda, mass behavior, social change and social movements, group differences. 3.101. 9:20-10:40. 3 s.h. Prerequisite: Psychology S91 or equivalent. MR. JONES

S211. THE PROBLEM CHILD (Also Education S211).—Study of problem behavior and adjustment in children with emphasis on the causes and treatment of conduct and neurotic disorders of the maladjusted child. Particular attention will be paid to mental hygiene principles in the handling of problem children in school and home. 2.105. 9:20-10:40. 3 s.h. MR. BORSTELMANN

S232. PSYCHOLOGY OF THE PHYSICALLY HANDICAPPED.—Survey of the psychological factors underlying adjustment to physical disabilities, with particular stress upon personality, emotional and social attributes. Selected case studies will be used to illustrate the integration of such factors in adjusting to home, school, and hospital settings. These cases will stress the psychological factors which hinder learning and retraining procedures. Discussion will center about psychological techniques to produce more effective progress in rehabilitation. 2.301. 7:40-9:00. 3 s.h. MR. GARMEZY

S303. RESEARCH.—Students who are properly qualified may carry on research work under direction. Hours to be arranged. 3 s.h. MR. RODNICK

SECOND TERM

S304. RESEARCH.—Students who are properly qualified may carry on research work under direction. Hours to be arranged. 3 s.h. Mr. ZENER

RELIGION

PROFESSOR JAMES CANNON, DEAN OF THE DIVINITY SCHOOL—110 DIVINITY SCHOOL (WEST CAMPUS); PROFESSOR H. E. MYERS, CHAIRMAN OF THE DEPARTMENT OF RELIGION—204 DIVINITY SCHOOL (WEST CAMPUS); PROFESSOR H. SHELTON SMITH, DIRECTOR OF GRADUATE STUDIES IN RELIGION—308 DIVINITY SCHOOL (WEST CAMPUS)

THE DEPARTMENT OF RELIGION

FIRST TERM

S51. THE ENGLISH BIBLE.—Survey of the contents of the historical and prophetic books of the Old Testament with particular reference to the literary, historical, and religious values. 3.106. 11:00-12:20. 3 s.h. Mr. DANIELS

S52 THE ENGLISH BIBLE.—Study of the Psalms, Wisdom Literature, and the literature of the New Testament with special attention given to the literary, historical, and religious values. 3.08. 9:20-10:40. 3 s.h. Mr. DANIELS

S101. THE SOCIAL TEACHINGS OF THE PROPHETS AND JESUS.—A study of the social teachings of the Old Testament prophets and of the social ideas of Jesus as they appear in the four gospels. Not open for credit to students who take Religion 103 or 114. 3.07. 9:20-10:40. 3 s.h. Mr. PHILLIPS

S132. THE CHRISTIAN AND CONTEMPORARY SOCIAL PROBLEMS.—A study of the relevance which Christianity has to such topics as science, marriage, the state, war, politico-economic ideas and practices, communism, and the race problem. The aim of the course will be to encourage personal evaluation and interpretation, using pertinent biblical teachings and the views of prominent contemporary writers as a basis for judgment. Students may not receive credit for both Religion 132 and 130. 3.07. 11:00-12:20. 3 s.h. Mr. PHILLIPS

SECOND TERM

S51. THE ENGLISH BIBLE.—For description see Term I. 3.08. 7:40-9:00. 3 s.h. Mr. SALES

S52. THE ENGLISH BIBLE.—For description see Term I. 3.101. 11:00-12:20. 3 s.h. Mr. WETHINGTON

S94. THE BEGINNINGS OF THE CHRISTIAN CHURCH.—A study of the development of Christianity in the first two hundred years. Special emphasis will be given to the work of Paul, the later New Testament writings, the *Apostolic Fathers*, and the early Apologists. There are no prerequisites required for this course. 3.08. 11:00-12:20. 3 s.h. Mr. SALES

S181. THE NATURE AND EARLY DEVELOPMENT OF RELIGION.—Introduction to the early history of religion, the beliefs and practices of the more primitive peoples, and the religious life of the ancient world. 3.07. 9:20-10:40. 3 s.h. Mr. WETHINGTON

THE DIVINITY SCHOOL

Courses carrying credit in the Divinity School only are numbered from 101 to 199. Courses approved for credit in both the Divinity School and the Graduate School of Arts and Sciences are numbered above 200. Students entering the Divinity School for the first time in the Summer Session of 1954 will choose courses numbered from 101 to 199.

FIRST TERM

S107 (DS). THE PERSON AND WORK OF CHRIST.—An intensive examination of classical types of Christological and soteriological formulation in the history of Christian reflection, assessment and constructive position. For Divinity School students. 3.109. 7:40-9:00. 3 s.h. Mr. CUSHMAN

S120 (DS). THE CREEDS OF CHRISTENDOM.—A historical interpretative study of great Christian creeds and confessions. For Divinity School students. 3.109. 1:40-3:00. 3 s.h. MR. SCHAFER

S192 (DS). CHRISTIANITY AND INTERNATIONAL RELATIONS.—An application of Christian Ethics to world problems. For Divinity School students. 3.109. 9:20-10:40. 3 s.h. MR. LACY

S224 (DS). CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory concerning man with a view to critical evaluation and construction. For Divinity School students and Graduate students. 3.109. 11:00-12:20. 3 s.h. MR. CUSHMAN.

SECOND TERM

S138 (DS). GREAT BOOKS IN CHRISTIAN HISTORY.—An intensive study of Augustine's *Confessions*, Thomas a Kempis' *Imitation of Christ*, Erasmus' *Complaint of Peace*, Luther's *Christian Liberty*, Calvin's *Instruction in Faith*, and Andrewes' *Private Devotions*. For Divinity School students. 3.109. 7:40-9:00. 3 s.h. MR. PETRY

S169 (DS). THEORIES OF RELIGIOUS EDUCATION.—A critical investigation of current theories of Religious Education. For Divinity School students. 3.109. 1:40-3:00. 3 s.h. MR. KALE

S301 (DS). THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in post-Exilic Judaism. For Divinity School students and Graduate students. 3.109. 9:20-10:40. 3 s.h. MR. BROWNLEE

S331 (DS). THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian church prior to the Protestant Reformation. For Divinity School students and Graduate students. 3.109. 11:00-12:20. 3 s.h. MR. PETRY

SOCIOLOGY

PROFESSOR HOWARD E. JENSEN, CHAIRMAN—215E SOCIAL SCIENCE BUILDING (WEST CAMPUS); PROFESSOR HORNELL HART, DIRECTOR OF GRADUATE STUDIES—215D SOCIAL SCIENCE BUILDING (WEST CAMPUS)

The Department of Sociology offers graduate work leading to the A.M. and Ph.D. degrees. Before undertaking advanced work in this department, a student must have completed a minimum of twelve semester hours of approved preliminary courses in the field, and twelve additional semester hours in the field or in related work. A student who is deficient in the minimum required work will be asked to take additional undergraduate courses agreed upon in conference with the Director of Graduate Studies.

Candidates for advanced degrees in Sociology usually take minor work in Psychology, Economics, Political Science, Education, History, or Religion. Detailed requirements for the minor work, and for majors in other departments who wish to present Sociology as minor work, may be obtained from the Director of Graduate Studies.

FIRST TERM

S101. GENERAL SOCIOLOGY.—An introduction to the scientific study of social life, its origin, evolution, and organization as illustrated by the study of a number of concrete social problems. 10.216. 7:40-9:00. 3 s.h. MR. ROY

(Course 91-92, or 101, or 111, or 112 is prerequisite to all other courses in the department. Course 91-92, or 101 is required of all students majoring in the department.)

S261. PROBLEMS IN INDUSTRIAL SOCIOLOGY.—Analysis of human relations problems that confront administrators of industrial institutions and leaders in industrial community life. In this course emphasis falls on the examination of concrete case materials and appraisal of published research with consideration of possibilities for further development of scientific procedures in the field of industrial sociology. 10.216. 9:20-10:40. 3 s.h. MR. ROY

S246. PUBLIC OPINION AND PROPAGANDA.—Nature and development of public opinion; relative to attitudes, biases, stereotypes and controversial issues; role of leaders, pressure groups and minority groups; use of radio, press, motion picture and graphic arts; propaganda and censorship; measurements of public opinion. 2.301. 9:20-10:40. 3 s.h. Mr. SCHETTLER

S274. CONTEMPORARY SOCIAL PROBLEMS.—A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society; natural disasters, poverty, physical defectiveness, malnutrition, mental deficiency, mental disease, undirected leisure activities and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. Not open to students who have had Sociology 271. 10.216. 11:00-12:20. 3 s.h. Mr. SCHETTLER

SECOND TERM

S250. MARRIAGE AND THE FAMILY.—An analysis of contemporary marriage and family experiences with emphasis on its functions, problems, resources, and values. Not open to students who have received credit for Religion 170. 10.216. 11:00-12:20. 3 s.h. Mr. HART

S286. SOCIAL ETHICS.—A study of sociological fundamentals underlying ethics, including the controversy between materialistic and idealistic social thinkers, the nature of personalities and of social organization, the nature of social values, types of social interaction and their effects upon general social values, underlying principles and facts of social change, and the bearings of all these upon certain social problems. 10.216. 7:40-9:00. 3 s.h. Mr. HART

SPANISH

PROFESSOR BRADY R. JORDAN, CHAIRMAN OF DEPARTMENT OF ROMANCE LANGUAGES—214 CARR BUILDING (EAST CAMPUS); PROFESSOR L. B. WALTON, DIRECTOR OF GRADUATE STUDIES OF THE DEPARTMENT OF ROMANCE LANGUAGES—LIBRARY 234-B (WEST CAMPUS); PROFESSOR GIFFORD DAVIS, DIRECTOR OF THE SCHOOL OF SPANISH STUDIES—201 GRAY (WEST CAMPUS)

FIRST TERM

S1. ELEMENTARY SPANISH.—Essentials of grammar, reading of appropriate material, drill in the spoken language. June 9-28. 2.102. 7:40-9:00 and 11:00-12:20. 3 s.h. Mr. RUBIO

S2. ELEMENTARY SPANISH.—Continuation of S1. June 29-July 17. 2.102. 7:40-9:00 and 11:00-12:20. 3 s.h. Mr. RUBIO

NOTE: A student enrolled in S2 must also attend S1 unless he has passed Spanish 1 in the immediate spring semester.

S3. INTERMEDIATE SPANISH.—Reading in standard literary text; review of verbs and syntax; exercises in the spoken language based on the reading text; constant use of Spanish as the medium of instruction. 2.105. 7:40-9:00. 3 s.h. Mr. AMOR Y VÁZQUEZ

S4. INTERMEDIATE SPANISH.—Reading of modern short stories and novels, with emphasis on achievement of ability to read without translation; continued oral-aural drill; idiom study and grammar review as necessary. 2.105. 11:00-12:20. 3 s.h. Mr. TORRE

S65. INTRODUCTION TO MODERN SPANISH LITERATURE.—Study of representative masterpieces; brief lectures in Spanish; collateral reading of critical commentaries. 2.201G. 7:40-9:00. 3 s.h. Mr. TORRE

S68. INTRODUCTION TO SPANISH-AMERICAN LITERATURE.—Study of typical works, chiefly of the modern period; brief lectures on literary, social and cultural backgrounds and tendencies; collateral readings and reports. 2.201G. 11:00-12:20. 3 s.h. Mr. AMOR Y VÁZQUEZ

S174. CONVERSATION AND PRONUNCIATION.—The aim of this course is two-fold: to improve the student's pronunciation and to increase his power of oral expression. The elements of Spanish phonetics will be presented in conjunction with practical exercises. Practice in oral expression will be afforded by class discussion of selected topics. 3.201. 9:20-10:40. 3 s.h. Mr. PREDMORE

S261. NINETEENTH CENTURY SPANISH NOVEL.—A study of literary and social trends in the last half of the Nineteenth Century. 3.08. 7:40-9:00.

MR. DAVIS

S270. THE SPANISH LANGUAGE IN AMERICA.—The development of the Spanish language from the time of the Discovery to the present. 2.02. 11:00-12:20.
3 s.h.

MR. PREDMORE

ZOOLOGY

PROFESSOR I. E. GRAY, CHAIRMAN, 218 BIOLOGY; PROFESSOR K. M. WILBUR, DIRECTOR OF GRADUATE STUDIES, 327 BIOLOGY (WEST CAMPUS)

All classes in Zoology offered on Duke Campus in Term I will begin on June 22 and continue through July 17. All classes in Zoology offered at Duke Marine Laboratory at Beaufort, North Carolina, in Term I will begin on June 10 and continue through July 17. All classes in Zoology offered on Duke Campus in Term II will begin on July 21 and continue through August 14. All classes in Zoology offered at Duke Marine Laboratory, Beaufort, North Carolina, in Term II will begin on July 21 and continue through August 27. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* page 19 of this *Bulletin*.

For admission to candidacy for a Master's degree in Zoology, a student should have completed an undergraduate major in Zoology (courses in General Science and Botany are not counted as a part of a Zoology major). This normally amounts to about twenty-four semester hours, which should be distributed among various fields of Zoology, and must include Vertebrate Zoology or Comparative Anatomy, Physiology, and Embryology, passed with creditable grades. A candidate should also have completed at least one year of Chemistry. Work for the degree will require eighteen hours in advanced courses in Zoology, and six hours in another department for a minor, in addition to a thesis. Before registration for a degree, students should confer with the Director of Graduate Studies for the Department. Students not candidates for a degree may take courses offered if they have necessary prerequisites but may not count them toward a degree until an undergraduate major has been completed.

FIRST TERM (Duke Campus)

S1. ANIMAL BIOLOGY.—The principles of biology as applied to animals. Lecture, recitation, and laboratory daily, 8:00-12:00, 2:00-4:00. 9.120. June 22-July 17.
4 s.h.

MR. VERNBERG

S219. SPECIAL PROBLEMS.—Seniors only. Permission must be obtained in advance from the Director of Undergraduate Studies and the instructor under whose direction the student wishes to work. Hours to be arranged. 2-6 s.h.

STAFF

S353. RESEARCH.—Hours to be arranged. 2-6 s.h.

STAFF

FIRST TERM (Duke Marine Laboratory at Beaufort, North Carolina)

S203. MARINE ECOLOGY.—A study of marine animals in relation to environment. Consideration of environmental factors, succession, rhythms, communities, intraspecific and interspecific relations, productivity, conservation, problems, etc., concerned with animal life in the ocean. Lectures, reviews, conferences, field and laboratory work. 6 s.h.

MR. GRAY

S219. SPECIAL PROBLEMS. 2-6 s.h.

STAFF

S245. RADIATION BIOLOGY.—An introductory course which will deal with the basic physical, chemical, and biological principles upon which the study of the biological effects of radiation is based. It will consist of three sections: Radiation Physics, Radiation Biochemistry, and Radiation Physiology. Laboratory work using various radiation sources and a number of organisms will give an opportunity to investigate these principles at first hand. Special lecturers will include members of the staff of the Biology Division of the Oak Ridge National Laboratory. Prerequisites: Mathematics through trigonometry, college physics, inorganic and organic chemistry. 6 s.h.

MR. WILBUR

S353. RESEARCH. 2-6 s.h.

STAFF

SECOND TERM (Duke Campus)

S2. GENERAL ZOOLOGY.—A brief survey of the animal kingdom. Lecture, recitation, and laboratory daily, 8:00-12:00, 2:00-4:00. 9.120. July 21-August 14. 4 s.h.

MR. NACE

S219. SPECIAL PROBLEMS. 2-6 s.h.

STAFF

S353. RESEARCH. 2-6 s.h.

STAFF

SECOND TERM (Duke Marine Laboratory, Beaufort, North Carolina)

S219. SPECIAL PROBLEMS. 2-6 s.h.

STAFF

S274. MARINE INVERTEBRATE ZOOLOGY.—A study of invertebrate animals that occur in the Beaufort region. A number of field trips will be made to a variety of habitats to study, collect, and classify animals in their natural environments. The structure and habits of living invertebrates as well as their behavior under certain experimental conditions will be studied in the laboratory. 6 s.h.

MR. BOOKHOUT

S353. RESEARCH. 2-6 s.h.

STAFF

DUKE UNIVERSITY SUMMER SESSION
APPLICATION FOR DORMITORY ROOM

Application for room reservations and all correspondence concerning such reservation should be addressed to: Housing Bureau, Duke Station, Durham, North Carolina.

Room assignment will be made only upon the applicant's admission to the Summer Session, as certified by the Summer Session Office, and upon payment of full room rent. Applicants who expect to be in residence for longer than six weeks are urged to make advance reservation for the entire period and thus avoid, to the extent that housing arrangements make it practicable, the necessity of moving from one room to another during the full term of residence.

Rental fees . . . etc. These fees are refundable provided the applicant cancels his room reservation at least fifteen (15) days before the opening of the session for which he is applying for admission.

If the applicant requests a double room but gives no preference of roommate, Bureau officials will try to assign a roommate of seemingly congenial interests. It is understood, however, that the responsibility for getting and keeping a roommate rests with the applicant; otherwise, it will be necessary for him to move to a single room or to make the indicated financial adjustment.

Name..... Date.....

Present address.....

Permanent address.....

(Address to which mail always will be forwarded)

Present position.....

Address.....

Academic degrees earned.....

College conferring)

(Degree)

(Date conferred)

If you are in college now, give name of institution and your class:

.....
(Name of college)

.....
(Class)

Department of your major subject.....

Will you be writing a thesis this summer? Yes..... No.....

Date of your expected arrival at Duke for the Summer Session.....

Number of weeks you expect to remain.....

Type of room desired: Single..... Double.....

Name of preferred roommate, if any.....

Address.....

DIRECTIONS TO SUMMER SESSION APPLICANTS

All applicants for Summer Session courses who are not now in residence at Duke University must fill out accurately and in detail the form below and return it to the Director of the Summer Session. Preference in enrollment will be given to persons returning the form promptly, but a place in a particular course cannot be assured until all fees are paid. Undergraduates or graduates who are enrolled in a university or college other than Duke University and who are seeking to transfer summer session credits to the college in which they are matriculated should request a course approval form to be certified by their dean or registrar. Persons applying for admission to the Graduate School of Duke University should write the Dean of the Graduate School for the necessary forms in addition to completing the form below.

No. _____ Approved _____ Date _____

APPLICATION FOR ENROLLMENT IN THE DUKE UNIVERSITY SUMMER SESSION

Mr., Mrs., Miss _____
(Please Print)

Street address, Rural route, or P. O. Box _____

Post Office _____ State _____

Nationality _____ Race _____

Please reserve a place for me in the following courses listed in the Summer Session Bulletin.

Department	No. of Course	Title of Course
------------	---------------	-----------------

Name and address of High School from which you graduated _____

Have you attended a college? Yes _____ No _____

Name and address of college _____

In what school or college of Duke University are you seeking to enroll (check one):

Undergraduate credits

- ☐ Trinity College (men)
- ☐ The Woman's College
- ☐ College of Engineering
- ☐ Special or unclassified
- ☐ Credits for transfer

Graduate credits

- ☐ Graduate School, Arts and Sciences
- ☐ Divinity School
- ☐ School of Forestry
- ☐ Special or unclassified
- ☐ Credits for transfer

Have you applied for admission to the Graduate School?.....

Are you at present a college student?..... If so, where?.....

..... What class?.....

Are you a full-time teacher?.....

Name and address of school.....

Teaching position.....

Total number years teaching experience.....

Will your fees be paid by:

(a) Yourself.....

(b) Veterans' Administration, Public Law 346 or 16.....

(c) Funds received under Public Law 550.....

Have you attended previous Summer Sessions at Duke: Yes.....;

Years.....; No.....

BULLETIN
OF
DUKE UNIVERSITY



The Graduate School
of Arts and Sciences

ANNOUNCEMENTS FOR 1954-1955

Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

For BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

For BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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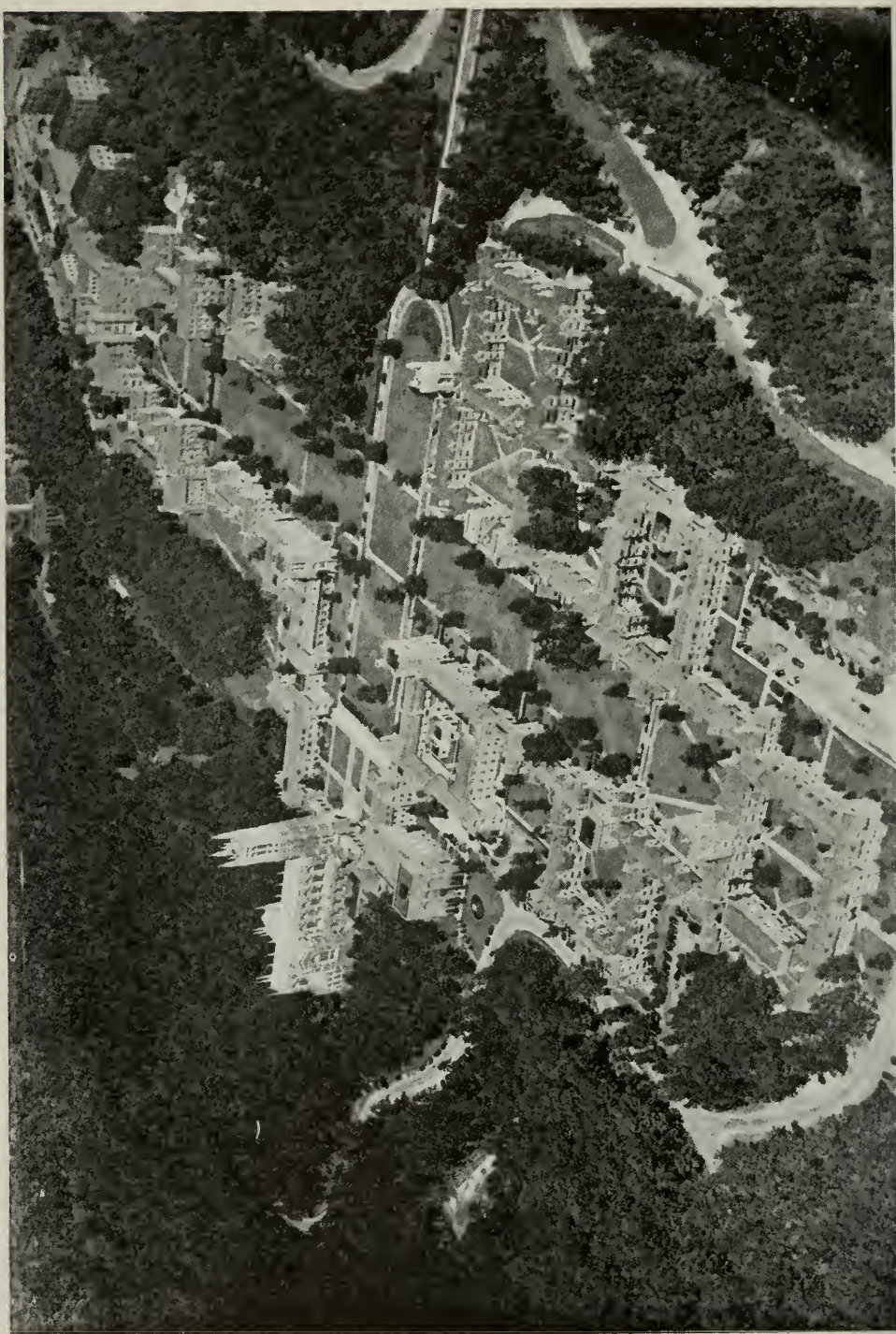
BULLETIN
OF
DUKE UNIVERSITY

THE GRADUATE SCHOOL
OF ARTS AND SCIENCES



1953-1954
ANNOUNCEMENTS FOR 1954-1955

DURHAM, NORTH CAROLINA
1954



UNIVERSITY OF WEST CAMPUS

Table of Contents



	PAGE
CALENDAR OF THE GRADUATE SCHOOL	5
OFFICERS OF ADMINISTRATION	8
INSTRUCTIONAL STAFF	9
HOLDERS OF FELLOWSHIPS AND SCHOLARSHIPS	17
ADMISSION	32
Registration	33
DEGREES OFFERED	34
Master of Arts	35
Master of Education	36
Master of Arts in Teaching	38
Doctor of Philosophy	39
Doctor of Education	42
General Regulations	44
AWARDS AND FEES	46
Fellowships, Scholarships, and Assistantships	46
Tuition, Fees and Expenses	47
Living Accommodations	48
FACILITIES FOR GRADUATE STUDY	51
The Libraries	51
Science Laboratories	53
Oak Ridge Institute of Nuclear Studies	55
Duke Forest	55
Cooperative Programs with the University of North Carolina	55
Research and Publication	56
Appointments Office	57
Foreign Students	57
Graduate Study in the Summer Session	57
COURSES OF INSTRUCTION, alphabetically, by departments	59
Aesthetics, Art, and Music	59
Ancient Languages and Literature	59

Botany	60
Chemistry	63
Economics	65
Education	67
English	71
Forestry	73
Germanic Languages and Literature	75
History	75
Mathematics	78
Philosophy	80
Physics	81
Political Science	83
Psychology	86
Religion	88
Romance Languages	91
Sociology and Anthropology	93
Zoology	96
Medical School	98
ADVANCED DEGREES CONFERRED JUNE 1, 1953	101
ADVANCED DEGREES CONFERRED SEPTEMBER 1, 1952	104

Calendar of the Graduate School



Summer Session 1954

1954

- May 3-4 Monday, Tuesday—Advance registration for current students.
- June 9 Wednesday—Registration of students for Summer Session, first term.
- June 10 Thursday—Instruction begins for Summer Session, first term.
- July 8 Thursday—Final date for filing with the Dean of the Graduate School statement of intention to complete Master's degree requirements during the first term, and for filing thesis title.
- July 9 Friday—French examinations for candidates for graduate degrees. Candidates register in the Graduate School Office not later than July 1.
- July 17 Saturday—First term of Summer Session ends.
- July 20 Tuesday—Registration of students for second term of Summer Session.
- July 21 Wednesday—Instruction begins for second term of Summer Session.
- July 26 Monday—Final date for filing with the Dean of the Graduate School statement of intention to complete Master's degree requirements during the second term, and for filing thesis title.
- Aug. 27 Friday—Second term of Summer Session ends.

Academic Year 1954-1955

- Sept. 20 Monday—Language Examinations in French and German. French, 1:00 P.M., German, 2:00 P.M., both in 114 Physics Building.
- Sept. 20-22 Monday through Wednesday—Registration of graduate students for first semester.
- Sept. 23 Thursday—Classes begin.
- Oct. 15 Friday—Last day for submitting thesis subjects for the degrees of Doctor of Philosophy and Doctor of Education.
- Nov. 15 Monday—Last day for submitting thesis subjects for the degrees of Master of Arts, Master of Education, and Master of Arts in Teaching.
- Nov. 24 Wednesday, 5:00 P.M.—Thanksgiving recess begins.
- Nov. 29 Monday, 8:00 A.M.—Classes are resumed.
- Dec. 6-11 German examinations for candidates for graduate degrees. Candidates register in the Graduate School Office for these examinations not later than November 29.
- Dec. 11 Saturday—Founders Day.
- Dec. 18 Saturday, 12:30 P.M.—Christmas recess begins.

1955

- Jan. 3 Monday, 8:00 A.M.—Classes are resumed.
- Jan. 8-17 Reading period.
- Jan. 11-12 Tuesday and Wednesday—Registration of resident graduate students for second semester.
- Jan. 12 Wednesday—French examinations for candidates for graduate degrees, 4:00 P.M., 210 Divinity School. Candidates register in the Graduate School Office for these examinations not later than January 5.
- Jan. 18 Tuesday—Final examinations begin.
- Jan. 28 Friday—Final examinations end.
- Feb. 1 Tuesday—Registration for second semester of students not in residence during first semester.
- Feb. 2 Wednesday—Classes are resumed.
- March 1 Tuesday—Last day for applying for University fellowships, graduate assistantships, and graduate scholarships.
- March 9 Wednesday—Students who expect to receive advanced degrees in June must notify the Graduate School Office before this date.
- March 26 Saturday, 12:30 P.M.—Spring recess begins.
- April 4 Monday, 8:00 A.M.—Classes are resumed.
- April 15 Friday—Last day for submitting theses for degrees of Doctor of Philosophy and Doctor of Education.
- April 15 Friday—French examinations for candidates for graduate degrees, 4:00 P.M., 210 Divinity School. Candidates register in the Graduate School Office for these examinations not later than April 5.
- May 2 Monday—Last day for submitting theses for degrees of Master of Arts, Master of Education, and Master of Arts in Teaching.
- May 2 Monday—Last day for paying special dissertation fee of \$50.00 required of candidates for the degrees of Doctor of Philosophy and Doctor of Education.
- May 2-16 Reading period.
- May 9-14 German examinations for candidates for graduate degrees. Candidates register in the Graduate School Office for these examinations not later than May 2.
- May 23 Monday—Final examinations begin.
- June 2 Thursday—Final examinations end.
- June 4 Saturday—Commencement begins.
- June 5 Sunday—Commencement Sermon.
- June 6 Monday—Graduating Exercises.

1954

JANUARY	APRIL	JULY	OCTOBER
S M T W T F S	S M T W T F S	S M T W T F S	S M T W T F S
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
FEBRUARY	MAY	AUGUST	NOVEMBER
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MARCH	JUNE	SEPTEMBER	DECEMBER
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1955

JANUARY	APRIL	JULY	OCTOBER
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FEBRUARY	MAY	AUGUST	NOVEMBER
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MARCH	JUNE	SEPTEMBER	DECEMBER
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Officers of Administration



EDENS, ARTHUR HOLLIS, Ph.D., LL.D. <i>President of the University</i>	2138 Myrtle Drive
WANNAMAKER, WILLIAM HANE, A.M., Litt.D. <i>Vice-Chancellor of the University</i>	615 West Campus
GROSS, PAUL MAGNUS, Ph.D. <i>Vice-President in the Division of Education and Dean of the University</i>	3816 Dover Road, Hope Valley
SYDNOR, CHARLES SACKETT, M.A. (Oxon.), Ph.D., Litt.D., LL.D. <i>Dean of the Graduate School of Arts and Sciences</i>	116 Pincrest Road
JORDAN, CHARLES EDWARD, A.B., LL.D. <i>Vice-President in the Division of Public Relations and Secretary of the University</i>	813 Vickers Avenue
HERRING, HERBERT JAMES, A.M., LL.D. <i>Vice-President in the Division of Student Life and Dean of Trinity College</i>	2010 Myrtle Drive
BROWER, ALFRED SMITH, A.B. <i>Business Manager and Comptroller</i>	614 West Campus
MARKHAM, CHARLES BLACKWELL, A.M. <i>Treasurer of the University</i>	204 Dillard Street
POWELL, BENJAMIN EDWARD, Ph.D. <i>Librarian</i>	3609 Hathaway Road, Hope Valley
WARD, CHARLES EUGENE, Ph.D. <i>Director of Admissions, the Graduate School</i>	2429 Perkins Road
INMAN, SARA ANNE, B.S. <i>Administrative Assistant</i>	1100 Oakland Avenue

EXECUTIVE COMMITTEE OF THE GRADUATE FACULTY

CHARLES SACKETT SYDNOR, M.A. (Oxon.), Ph.D., Litt.D., LL.D.
Dean of the Graduate School of Arts and Sciences, ex officio

CHARLES A. BAYLIS, Ph.D.

ROBERT TAYLOR COLE, Ph.D.

WILLIAM BASKERVILLE HAMILTON, JR., Ph.D.

MARCUS EDWIN HOBBS, Ph.D.

WILLIAM HENRY IRVING, B.A. (Oxon.), Ph.D.

PAUL JACKSON KRAMER, Ph.D.

Instructional Staff



MEMBERS OF THE GRADUATE SCHOOL FACULTY

The date denotes the first year of service at Duke University.

ADAMS, DONALD KEITH, (1931) Ph.D. <i>Professor of Psychology</i>	2508 Cornwallis Road
ANDERSON, LEWIS EDWARD, (1936) Ph.D. <i>Associate Professor of Botany</i>	2020 Sunset Avenue
ANDERSON, ROGER FABIAN, (1950) Ph.D. <i>Associate Professor of Forest Entomology</i>	2528 Perkins Road
*BAILEY, JOSEPH RANDLE, (1946) Ph.D. <i>Assistant Professor of Zoology</i>	Zoology Department
BANHAM, KATHERINE MAY, (1946) Ph.D. <i>Associate Professor of Psychology</i>	115 North Dillard Street
BAUM, PAULL FRANKLIN, (1922) Ph.D. <i>James B. Duke Professor of English</i>	112 Pinecrest Road
BAYLIS, CHARLES A., (1952) Ph.D. <i>Professor of Philosophy</i>	601 East Markham Avenue
BEACH, WILLIAM WALDO, (1946) B.D., Ph.D. <i>Professor of Christian Ethics</i>	100 Vineyard Street
BEARD, JOSEPH WILLIS, (1937) M.D. <i>Professor of Surgery in Charge of Experimental Surgery; Associate Professor of Virology</i>	Route 3, Hillsboro, N. C.
BECKER, ROLAND FREDERICK, (1951) Ph.D. <i>Associate Professor of Anatomy</i>	1010 Monmouth Avenue
BERNHEIM, FREDERICK, (1930) Ph.D. <i>Professor of Pharmacology</i>	Woodridge Drive
BERNHEIM, MARY LILIAS CHRISTIAN, Mrs., (1930) Ph.D. <i>Associate Professor of Biochemistry</i>	Woodridge Drive
BIGELOW, LUCIUS AURELIUS, (1929) Ph.D. <i>Professor of Chemistry</i>	131 Pinecrest Road
BILLINGS, WILLIAM DWIGHT, (1952) Ph.D. <i>Associate Professor of Botany</i>	708 Louise Circle
BLACK, MARTIN LEE, JR., (1930) M.B.A., C.P.A. <i>Professor of Accounting</i>	135 Pinecrest Road
†BLOCK, MARTIN M., (1952) Ph.D. <i>Assistant Professor of Physics; Research Associate</i>	927 Lambeth Circle
BLOMQUIST, HUGO LEANDER, (1920) Ph.D. <i>Professor of Botany</i>	922 Demerius Street
BOLMEIER, EDWARD CLAUDE, (1948) Ph.D. <i>Professor of Education</i>	217, Faculty Apartments

* Absent on sabbatical leave, 1953-54.

† Absent on leave, 1953-54.

- BOOKHOUT, CAZLYN GREEN, (1935) Ph.D.
Associate Professor of Zoology 1307 Alabama Avenue
- BORSTELMANN, LLOYD, (1953) Ph.D.
Assistant Professor of Psychology 126 North Street, Chapel Hill
- BOYCE, BENJAMIN, (1950) Ph.D.
Professor of English 1200 Dwire Place
- BRADSHAW, CHARLES KILGO, (1939) Ph.D.
Associate Professor of Chemistry 118 Pinecrest Road
- BRAIBANTI, RALPH J. D., (1953) Ph.D.
Associate Professor of Political Science Route 1
- BRINKLEY, ROBERTA FLORENCE, (1947) Ph.D.
Professor of English East Campus
- BROWN, FRANCES CAMPBELL, (1931) Ph.D.
Associate Professor of Chemistry 1205 Dwire Place
- BROWNLEE, WILLIAM HUGH, (1948) Th.M., Ph.D.
Assistant Professor of Old Testament 2809 Fairview Road
- BUCK, ROGER CONANT, (1953) B. Phil. (Oxon.)
Visiting Assistant Professor of Philosophy 1017½ Gloria Avenue
- CARLITZ, LEONARD, (1932) Ph.D.
Professor of Mathematics 2303 Cranford Road
- CARR, JOHN WINDER, JR., (1926) Ph.D.
Professor of Education 926 Monmouth Avenue
- CARROLL, EBER MALCOLM, (1923) Ph.D.
James B. Duke Professor of History K1C, University Apartments
- CARTTER, ALLAN MURRAY, (1952) Ph.D.
Assistant Professor of Economics; Research Associate 1208 Dwire Place
- CARTWRIGHT, WILLIAM H., (1951) Ph.D.
Professor of Education 942 Lambeth Circle
- *CASTELLANO, JUAN RODRIGUEZ, (1947) Doctor en Filosofía y Letras
Associate Professor of Romance Languages 2511 Perkins Road
- CHILDS, BENJAMIN GUY, (1924) M.A.
Professor of Education 1019 West Markham Avenue
- CLARK, KENNETH WILLIS, (1931) Ph.D.
Professor of New Testament Language and Literature 1308 West Markham Avenue
- CLARK, ROMANE LEWIS, (1953) Ph.D.
Instructor of Philosophy 10, 5th Street and Markham Avenue
- CLYDE, PAUL HIBBERT, (1937) Ph.D.
Professor of History 1311 Carolina Avenue
- COHEN, LOUIS DAVID, (1946) Ph.D.
Associate Professor of Psychology; Assistant Professor of Clinical Psychology 913 Monmouth Avenue
- †COILE, THEODORE STANLEY, (1935) Ph.D.
Professor of Forest Soils Box 301, Route 1, Hillsboro Road
- COLE, ROBERT TAYLOR, (1935) Ph.D.
James B. Duke Professor of Political Science 7 Sylvan Road
- COLLIER, GEORGE H., (1951) Ph.D.
Assistant Professor of Psychology 510 East Club Boulevard

* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, January 31, 1954.

- CONANT, NORMAN FRANCIS, (1935) Ph.D.
*Professor of Mycology; Associate Professor
of Baeteriology* Route 1, Old Cornwallis Road
- CONNERY, ROBERT HOWE, (1949) Ph.D.
Professor of Political Science 906 Buchanan Boulevard
- COWTER, FREDERICK AUGUSTUS GRANT, (1918) Ph.D.
Professor Emeritus of Romance Languages 1017 Dacian Avenue
- CURTISS, JOHN SHELTON, (1945) Ph.D.
Professor of History Route 2, Box 95, Guess Road
- CUSHMAN, ROBERT EARL, (1945) B.D., Ph.D.
Professor of Systematic Theology 130 Pinecrest Road
- DAL, BINGHAM, (1943) Ph.D.
*Professor of Psychology; Professor of Medical
Psychology* 2404 Perkins Road
- DAVIES, WILLIAM DAVID, (1950) B.D., D.D.
Professor of Biblical Theology 810 Second Street
- DAVIS, GIFFORD, (1930) Ph.D.
Professor of Romance Languages 2248 Cranford Road
- DEMOREST, JEAN-JACQUES, (1948) Ph.D.
Assistant Professor of Romance Languages 2428 Perkins Road
- DE VYVER, FRANK TRAVER, (1935) Ph.D.
Professor of Economics 8 Sylvan Road
- DEWEY, DONALD J., (1950) M.A.
Assistant Professor of Economics 611 Watts Street
- DRESSSEL, FRANCIS GEORGE, (1929) Ph.D.
Professor of Mathematics 309 Francis Street
- DUKE, KENNETH LINDSAY, (1940) Ph.D.
Associate Professor of Anatomy 701 West Club Boulevard
- EADIE, GEORGE SHARP, (1930) Ph.D.
Professor of Physiology and Pharmacology 3433 Dover Road, Hope Valley
- *EASLEY, HOWARD, (1930) Ph.D.
Associate Professor of Education Guess Road
- ELLIOTT, WILLIAM WHITFIELD, (1925) Ph.D.
Professor of Mathematics Hillandale Road
- EVERETT, JOHN WENDELL, (1932) Ph.D.
Professor of Anatomy 2605 University Drive
- FAIRBANK, WILLIAM MARTIN, (1952) Ph.D.
Associate Professor of Physics 2016 Pershing Street
- FERGUSON, ARTHUR BOWLES, (1939) Ph.D.
Associate Professor of History Lebanon Circle, Guess Road
- GARMEZY, NORMAN, (1950) Ph.D.
Assistant Professor of Psychology 3423 Hope Valley Road
- GERGEN, JOHN JAY, (1936) Ph.D.
Professor of Mathematics 2803 Nation Avenue
- GILBERT, ALLAN H., (1920) Ph.D.
Professor of English 503 Compton Place
- GOHDES, CLARENCE, (1930) Ph.D.
Professor of English 2614 Stuart Drive

* Absent on sabbatical leave, 1953-54.

GORDY, WALTER, (1946) Ph.D. <i>Professor of Physics</i>	2521 Perkins Road
GRAY, IRVING EMERY, (1930) Ph.D. <i>Professor of Zoology</i>	124 Pinecrest Road
GREULING, EUGENE, (1948) Ph.D. <i>Associate Professor of Physics</i>	2414 Perkins Road
GROSS, PAUL MAGNUS, (1919) Ph.D. <i>William Howell Pegram Professor of Chemistry</i>	3816 Dover Road, Hope Valley
GUTTMAN, NORMAN, (1951) Ph.D. <i>Assistant Professor of Psychology</i>	854 Louise Circle
HALL, FRANK GREGORY, (1926) Ph.D. <i>Professor of Physiology and Pharmacology</i>	122 Pinecrest Road
HALLOWELL, JOHN HAMILTON, (1942) Ph.D. <i>Professor of Political Science</i>	2709 Augusta Drive
HAMILTON, WILLIAM BASKERVILLE, JR., (1936) Ph.D. <i>Professor of History</i>	2256 Cranford Road
HANDLER, PHILIP, (1939) Ph.D. <i>Professor of Biochemistry and Nutrition</i>	2529 Perkins Road
HANNA, FRANK ALLAN, (1948) Ph.D. <i>Professor of Economics</i>	2239 Cranford Road
HARGITT, GEORGE THOMAS, (1930) Ph.D., Sc.D. <i>Professor Emeritus of Zoology</i>	811 Watts Street
HARRAR, ELWOOD SCOTT, (1936) Ph.D. <i>Professor of Wood Technology</i>	2228 Cranford Road
HART, HORNE LL NORRIS, (1938) Ph.D. <i>Professor of Sociology</i>	2535 Perkins Road
HATLEY, CHARLES CLEVELAND, (1917) Ph.D. <i>Professor of Physics</i>	708 Buchanan Boulevard
HAUSER, CHARLES ROY, (1929) Ph.D. <i>Professor of Chemistry</i>	1020 Rosehill Avenue
HETHERINGTON, DUNCAN CHARTERIS, (1930) Ph.D., M.D. <i>Professor of Anatomy</i>	K3B, University Apartments
HILL, DOUGLAS GREENWOOD, (1931) Ph.D. <i>Professor of Chemistry</i>	Box 275, Route 2, St. Mary's Road
HOBBS, MARCUS EDWIN, (1935) Ph.D. <i>Professor of Chemistry</i>	115 Pinecrest Road
HOOVER, CALVIN BRYCE, (1925) Ph.D., Litt.D. <i>James B. Duke Professor of Economics</i>	1702 Duke University Road
HORN, EDWARD CHARLES, (1946) Ph.D. <i>Assistant Professor of Zoology</i>	2509 Cascadilla Street
HUBBELL, JAY BROADUS, (1927) Ph.D., Litt.D. <i>Professor of English</i>	121 Pinecrest Road
HUMPHREY, DON DOUGAN, (1945) Ph.D. <i>Professor of Economics</i>	2802 Legion Avenue
*HUNTER, WANDA SANBORN, MRS., (1947) Ph.D. <i>Associate Professor of Zoology</i>	880 Louise Circle
IRVING, WILLIAM HENRY, (1936) B.A. (Oxon.), Ph.D. <i>Professor of English</i>	2707 Legion Avenue

* Absent on sabbatical leave, spring semester, 1953-54.

- JENSEN, HOWARD EIKENBERRY, (1931) B.D., Ph.D.
Professor of Sociology 143 Pinecrest Road
- JORDAN, BRADY RIMBEY, (1927) Ph.D.
Professor of Romance Languages 117 Pinecrest Road
- KENISTON, HAYWARD, (1952) Ph.D.
Visiting Lecturer in Romance Languages 214, Faculty Apartments
- KIMBLE, GREGORY ADAMS, (1952) Ph.D.
Associate Professor of Psychology 1808 Hillcrest Drive
- * KOCH, SIGMUND, (1942, 1948) Ph.D.
Professor of Psychology 2921 Horton Road
- KORKES, SEYMOUR, (1953) M.D.
Associate Professor of Biochemistry 3200 Guess Road
- KORSTIAN, CLARENCE FERDINAND, (1930) Ph.D.
Professor of Silviculture 4 Sylvan Road
- KRAMER, PAUL JACKSON, (1931) Ph.D.
Professor of Botany 2251 Cranford Road
- KRIGBAUM, WILLIAM R., (1952) Ph.D.
Assistant Professor of Chemistry 863 Louise Circle
- KRUMMEL, CHARLES ALBERT, (1922) Ph.D.
Professor Emeritus of German 2118 Englewood Avenue
- KUDER, GEORGE FREDERICK, (1948) Ph.D.
Professor of Psychology 2516 Perkins Road
- † LABARRE, WESTON, (1946) Ph.D.
Associate Professor of Anthropology 1311 Alabama Avenue
- LANDON, CHARLES EARL, (1926) Ph.D.
Associate Professor of Economics 1514 Edgevale Road
- LANNING, JOHN TATE, (1927) Ph.D.
Professor of History 3007 Surrey Road, Hope Valley
- ‡ LAPRADE, WILLIAM THOMAS, (1909) Ph.D.
Professor of History 1108 Monmouth Avenue
- LEWIS, HAROLD WALTER, (1949) Ph.D.
Assistant Professor of Physics 2307 Sprunt Street
- LONDON, FREDERICK, (1938) Ph.D., D es Sc.
James B. Duke Professor of Chemical Physics 1508 Oakland Avenue
- LUNDHOLM, OSKAR HELGE, (1930) Ph.D.
Professor of Psychology 803 Second Street
- § MCCREA, FORREST DRAPER, (1930) Ph.D.
Associate Professor of Physiology and Pharmacology 1023 Demerius Street
- MCKENZIE, LIONEL WILFRED, JR., (1948) M.A., B.Litt. (Oxon.)
Assistant Professor of Economics 15 Alastair Court
- McLENDON, JONATHON COLLINS, (1952) Ph.D.
Assistant Professor of Education 937 Lambeth Circle
- MANCHESTER, ALAN KREBS, (1929) Ph.D.
Professor of History 2016 Myrtle Drive
- MARKEE, JOSEPH ELDRIDGE, (1943) Ph.D.
James B. Duke Professor of Anatomy 1015 Demerius Street

* Absent on leave, 1953-54.

† Absent on sabbatical leave, spring semester, 1953-54.

‡ Retired, August 31, 1953.

§ Resigned, January 1, 1954.

- MARKMAN, SIDNEY DAVID, (1947) Ph.D.
Associate Professor of Art History and Archaeology 919 Urban Avenue
- NACE, GEORGE W., (1951) Ph.D.
Assistant Professor of Zoology 2402 Chapel Hill Road
- NAYLOR, AUBREY WILLARD, (1952) Ph.D.
Associate Professor of Botany 881 Louise Circle
- *NEGLEY, GLENN ROBERT, (1946) Ph.D.
Professor of Philosophy 1700 Shawnee Street
- NELSON, ERNEST WILLIAM, (1926) Ph.D.
Associate Professor of History 939 Lambeth Circle
- NEWSON, HENRY WINSTON, (1948) Ph.D.
Professor of Physics 1111 North Gregson Street
- NIELSEN, WALTER MCKINLEY, (1925) Ph.D.
James B. Duke Professor of Physics 139 Pinecrest Road
- NORDHEIM, LOTHAR WOLFGANG, (1937) Ph.D., Sc.D.
Professor of Physics 2255 Cranford Road
- OOSTING, HENRY JOHN, (1932) Ph.D.
Professor of Botany 2642 University Drive
- *PARKER, HAROLD TALBOT, (1939) Ph.D.
Associate Professor of History 12, Glenn Apartments, Dacian Avenue
- PATTERSON, ROBERT LEET, (1945) B.D., Ph.D.
Professor of Philosophy Washington Duke Hotel
- PEACH, WILLIAM BERNARD, (1951) Ph.D.
Assistant Professor of Zoology 2525 Chapel Hill Road
- PEARSE, ARTHUR SPERRY, (1926) Ph.D., LL.D.
Professor Emeritus of Zoology 803 Second Street
- PEELE, TALMADGE LEE, (1939) M.D.
Associate Professor of Anatomy; Assistant Professor of Medicine E2B University Apartments
- PENROD, KENNETH E., (1950) Ph.D.
Associate Professor of Physiology and Pharmacology 1815 Hillcrest Drive
- PERRY, HAROLD SANFORD, (1932) Ph.D.
Associate Professor of Botany 2302 Cranford Road
- †PETRY, RAY C., (1937) Ph.D., LL.D.
Professor of Church History 128 Pinecrest Road
- PETTY, OLAN LEE, (1952) Ph.D.
Assistant Professor of Education 2521 Shenandoah Avenue
- PHILPOTT, JANE, (1951) Ph.D.
Assistant Professor of Botany 804 Fourth Street
- POPE, HILDA PERSONS, (1948) Ph.D.
Assistant Professor of Bacteriology 802 Louise Circle
- POWELL, BENJAMIN EDWARD, (1946) Ph.D.
Librarian 3609 Hathaway Road, Hope Valley
- PREDMORE, RICHARD LIONEL, (1950) D.M.L.
Professor of Romance Languages 2413 Perkins Road
- PROCTOR, ARTHUR MARCUS, (1923) Ph.D.
Professor Emeritus of Education 1500 Edgevale Avenue

* Absent on sabbatical leave, 1953-54.

† Absent on sabbatical leave, spring semester, 1953-54.

- RANKIN, ROBERT STANLEY, (1927) Ph.D.
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- RANKIN, WILLIAM WALTER, JR., (1926) M.A.
Professor Emeritus of Mathematics 1011 Gloria Avenue
- RATCHFORD, BENJAMIN ULYSSES, (1928) Ph.D.
Professor of Economics 133 Pinecrest Road
- REYNOLDS, THOMAS D., (1953) Ph.D.
Assistant Professor of Education M4, 815 Demerius Street
- ROBERTS, HENRY STOUTTE, JR., (1948) Ph.D.
Associate Professor of Zoology Box 221, Route 5, Duke Homestead Road
- ROBERTS, JOHN HENDERSON, (1931) Ph.D.
Professor of Mathematics 2813 Legion Avenue
- RODNICK, ELIOT H., (1949) Ph.D.
Professor of Psychology; Director of Clinical Training in Psychology 2806 Legion Avenue
- ROGERS, ROBERT SAMUEL, (1937) Ph.D., F.A.A.R.
Professor of Latin 148 Pinecrest Road
- *ROPP, THEODORE, (1938) Ph.D.
Associate Professor of History 302 Woodridge Drive
- ROSE, JESSE LEE, (1936) Ph.D.
Associate Professor of Latin and Greek East Campus
- ROY, DONALD FRANCIS, (1950) Ph.D.
Assistant Professor of Sociology 904 Shepherd Street
- RUDISILL, MABEL F., (1948) Ph.D.
Associate Professor of Education 213 West Markham Avenue
- RUNDLES, RALPH WAYNE, (1945) Ph.D., M.D.
Associate Professor of Medicine 132 Pinecrest Road
- SAYLOR, JOHN HENRY, (1928) Ph.D.
Professor of Chemistry 707 West Club Boulevard
- SCHAFER, THOMAS ANTON, (1950) B.D., Ph.D.
Assistant Professor of Historical Theology 903 West Proctor Street
- *SCHETTLE, CLARENCE HENRY, (1946) Ph.D.
Associate Professor of Sociology 119 Pinecrest Road
- †SCHMIDT-NIELSEN, KNUT, (1952) Mag.Sc., Ph.D.
Professor of Zoology 2402 Chapel Hill Road
- SCHUMACHER, FRANCIS XAVIER, (1937) B.S.
Professor of Forestry 6 Sylvan Road
- SCHWERT, GEORGE WILLIAM, JR., (1946) Ph.D.
Associate Professor of Biochemistry 611 Hammond Street
- SHEARS, LAMBERT ARMOUR, (1927) Ph.D.
Associate Professor of German 917 Green Street
- *SIMMONS, EDWARD CHRISTIAN, (1947) Ph.D.
Professor of Economics 2510 Perkins Road
- SMITH, DAVID TILLERSON, (1930) M.D., Litt.D.
Professor of Bacteriology; Associate Professor of Medicine 3437 Dover Road, Hope Valley

* Absent on sabbatical leave, fall semester, 1953-54.

† Absent on leave, 1953-54.

- SMITH, HILRIE SHELTON, (1931) Ph.D., D.D., Litt.D.
James B. Duke Professor of American Religious Thought 2721 Dogwood Road
- SMITH, ROBERT SIDNEY, (1932) Ph.D.
Professor of Economics 2236 Cranford Road
- SPENCE, HERSEY EVERETT, (1918) B.D., D.D., Litt.D.
Professor Emeritus of Religious Education 3629 Hope Valley Road
- SPENGLER, JOSEPH JOHN, (1934) Ph.D.
Professor of Economics 2240 Cranford Road
- SPONER, HERTHA, D. E., (1935) Ph.D.
Professor of Physics 3309 Avon Road, Hope Valley
- STEVENS, HARRY R., (1947) Ph.D.
Assistant Professor of History University Apartments
- STINESPRING, WILLIAM FRANKLIN, (1936) Ph.D.
Professor of Old Testament 1107 Watts Street
- STOLTENBERG, CARL HENRY, (1951) Ph.D.
Assistant Professor of Forest Economics 942 Lambeth Circle
- STROBEL, HOWARD AUSTIN, (1948) Ph.D.
Assistant Professor of Chemistry 1013 Dacian Avenue
- STUMPF, WIPPERT ARNOT, (1948) Ph.D.
Associate Professor of Education 127 Pinecrest Road
- SYDNOR, CHARLES SACKETT, (1936) M.A. (Oxon.), Ph.D., Litt.D., LL.D.
James B. Duke Professor of History 116 Pinecrest Road
- TAYLOR, HAYWOOD MAURICE, (1930) Ph.D.
Professor of Toxicology; Associate Professor of Biochemistry 2620 University Drive
- THOMAS, JOSEPH MILLER, (1930) Ph.D.
Professor of Mathematics 2215 Cranford Road
- THOMPSON, EDGAR TRISTRAM, (1935) Ph.D.
Professor of Sociology 138 Pinecrest Road
- TRUESDALE, JAMES NARDIN, (1930) Ph.D.
Associate Professor of Greek 2804 Erwin Road
- TURNER, ARLIN J., (1953) Ph.D.
Professor of English 912 Green Street
- VOLLMER, CLEMENT, (1926) Ph.D.
Professor of German 2114 Myrtle Drive
- VON BECKERATH, HERBERT, (1935) Ph.D.
Professor of Economics and Political Science Lake Road, Route 1, Chapel Hill
- *VOSBURGH, WARREN CHASE, (1928) Ph.D.
Professor of Chemistry 2319 Englewood Avenue
- WALTON, LORING BAKER, (1929) Lic. es L., Ph.D.
Professor of Romance Languages 2235 Cranford Road
- WARD, CHARLES EUGENE, (1927) Ph.D.
Professor of English 2429 Perkins Road
- WATSON, RICHARD LYNES, JR., (1939) Ph.D.
Associate Professor of History 109 Pinecrest Road
- WAY, VERNON ELGIN, (1930) A.M., M.A.
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* Absent on sabbatical leave, spring semester, 1953-54.

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WELLS, HARRY W. A.B., The Johns Hopkins University	Zoology	Baltimore, Md.
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Admission



TO GRADUATE SCHOOL. Admission may be granted to a student who has received an A.B. or B.S. degree from an accredited institution after a four-year course of study. The undergraduate record should be well-rounded and of such quality as to give positive evidence of capacity for success in graduate study.

Before admission can be granted, the student must submit for appraisal the following documents: (a) An official transcript of all his college or graduate work, to be forwarded directly from the Registrar of his college to the Dean of the Graduate School at Duke University. (b) Two or three letters of recommendation, to be furnished by persons best qualified to judge the applicant as a prospective graduate student. According to a ruling of the Graduate School Faculty the following policy will be followed with respect to scores on the Graduate Record Examination: (a) If a student has already taken this examination, he must submit his scores for consideration by the Admissions officer; (b) under certain circumstances the Admissions officer may ask for scores on this examination before final decisions are made on the admission of the applicant; (c) the departments of Biochemistry, Economics, English, and Psychology require the submission of these scores before final decisions are made on full admission to the Graduate School. If the other documents of the applicant are satisfactory, he may be granted "provisional" admission until the Graduate Record Examination scores are submitted and accepted. Arrangements to take this examination can usually be made through officials of the student's college, or by correspondence with the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

APPLICATION PROCEDURE. A student desiring admission to the Graduate School, should request official application blanks from the Dean. These should be filled out fully and returned at the earliest moment. The other documents needed to complete the application, namely, transcripts, letters of recommendation, and Graduate Record Examination scores, must be forwarded directly from the institutions or individuals to the Dean of the Graduate School. In no case will such documents be accepted from the student.

The application and all supporting documents should be submitted to the Dean of the Graduate School not later than August 1 by those applying for the fall semester, or January 1 by those applying for the spring semester. Applications received later than these dates cannot

be accorded the same review or consideration as those received earlier. It is the student's responsibility to make certain that his application is complete and in order before the dates specified.

When the application is accepted and approved, the student will receive a letter of admission, giving the date by which he must notify the Dean of the Graduate School of his intention to enroll for the term for which he is granted admission.

Admission, once granted, is valid only for the term or year specified. Should a student be unable to enter the Graduate School at that time but wishes later to be admitted to a subsequent term, he must re-apply for admission, following the usual procedure. But he need only bring his application up to date, if he re-applies within two years of the date when he was first admitted.

Registration

Once the student has received notification of his admission to the Graduate School, but not until then, he may present himself for registration. During the registration periods, announced in the *Bulletin*, he first confers with the Director of Graduate Studies of his major department, who prepares an Approval Card, listing the course work to be taken during the semester. The student then presents this Approval Card to the Graduate School, which enrolls him officially in his courses.

WHO MUST REGISTER. (1) All students who enter course work or residence for credit; (2) all students who have completed minimum requirements for the Ph.D. degree, but are using in their research the facilities of the University; (3) all students who wish merely to "audit" a course or courses.

LATE REGISTRATION. All students are expected to present themselves for registration at the time stated in the *Bulletin*. *Those registering after the close of the announced registration period will be charged a late registration fee of five dollars.*

Degrees Offered



THE Graduate School of Arts and Sciences now offers the following degrees: The Master of Arts (A.M.), The Master of Education (M.Ed.), The Master of Arts in Teaching (M.A.T.), The Doctor of Philosophy (Ph.D.), and The Doctor of Education (Ed.D.).

Regulations Concerning Master's Degrees

RESIDENCE REQUIREMENTS. Candidates for all Master's degrees must spend, as a *minimum*, one full academic year in residence at Duke University. Often more time will prove necessary, depending upon the nature of the student's research problem and upon the student himself. Students who wish to complete their degrees wholly by summer work must be in residence for 30 weeks, and present 30 semester hours of registered credit.

ADMISSION TO CANDIDACY. In order to be considered a candidate for a Master's degree (A.M., M.Ed., M.A.T.) a student must (1) have received the approbation of the major department, or in the case of the M.A.T., of his committee, (2) have made passing grades in all his courses during his first semester (If he registers for fewer than 12 semester hours of graduate courses during his first semester, or if he is enrolled in the Summer Session, he must make passing grades in his initial 12 hours of graduate courses.), (3) have made a grade of "G" or "E" on at least 3 semester hours of this work.

If he does not fulfill these conditions on the initial semester hours, but does better work, signified by a substantial number of "G's" or "E's" in a subsequent term, he may be granted permission then to re-apply for candidacy.

TRANSFER OF GRADUATE CREDITS. Credit for graduate course work earned at another institution will be determined only after a student has spent one semester at Duke University. After completing his first semester, the student should file a request that his credits be reviewed and a decision made.

Under certain circumstances a maximum credit of 6 semester hours may be allowed for graduate courses completed elsewhere. The acceptance of credit up to this amount, however, will not reduce the minimum period of full-time registered residence at Duke University.

With the approval both of the student's major department and the

Dean of the Graduate School, a student who is granted such transfer credit may be permitted to register for as much as 12 semester hours of thesis research instead of the usual 6 semester hours. Or he may be permitted to fill out his schedule with as much as 6 semester hours of further undergraduate training or 6 semester hours of required language courses on the undergraduate level. In no case will credit be allowed for extension or correspondence courses.

TIME LIMITS FOR COMPLETION OF MASTER'S DEGREES.

The candidate for a Master's degree must complete all of his course requirements and the thesis within a period of six calendar years from the date of his initial registration. Credits earned over a longer period of time cannot be credited toward a degree.

THE THESIS. The thesis should essentially demonstrate the student's ability to collect, arrange, interpret, and report pertinent material on his special research problem. Although a publishable document is not required, the thesis must be written in a literate style, and should exhibit the student's competence in scholarly methods and procedures.

The Master of Arts Degree

UNDERGRADUATE PREREQUISITE. As a prerequisite to graduate study in his major subject, the student must have completed a *minimum* of 12 semester hours of approved college courses in that subject, and 12 additional semester hours in that subject or in related work. Since some departments require more than 12 semester hours, the student should read carefully the special requirements listed by his major department, which are included as headnotes to the course offerings in the *Bulletin*.

LANGUAGE REQUIREMENTS. The candidate for the A.M. degree must have a reading knowledge of at least one foreign language. (The several departments reserve the right to specify which foreign languages are acceptable.) Evidence of such knowledge may be furnished in either of two ways: (1) by successfully passing an examination, officially conducted by the appropriate foreign language department at Duke University, or (2) by a transcript showing the completion of the third college year of one language, or the second college year of each of two acceptable foreign languages.

MAJOR AND MINOR SUBJECT. In his graduate work, the student, in order to complete the course requirements for the A.M. degree, must present acceptable marks for a minimum of 24 semester hours of graduate courses. Of these, at least 12 semester hours must be in the major subject.

Outside of his major, the student must take a minimum of 6 semester hours in a minor subject, the department of the minor to be ap-

proved by his major department. The remaining 6 semester hours of the necessary 24 may be taken in either of these departments, or in another approved by the major department and by the Dean of the Graduate School. In addition to these he must present a thesis, which carries a credit of 6 semester hours. Thus, his earned credit for the degree totals a minimum of 30 semester hours.

REGULATIONS AND PROCEDURES. On or before November 15 of the academic year in which it is expected the degree will be conferred, the student must file with the Dean of the Graduate School, on the official form, the title of the thesis. This title must have the approval of the Director of Graduate Studies in the major department, and of the professor under whose direction the thesis will be written.

The student who completes all of his work for the degree and who expects to receive it at the regular commencement exercises in June, must so notify the Graduate School office before the March 15 preceding.

Four bound, typewritten copies of the thesis must be submitted, in approved form, to the Dean of the Graduate School on or before May 1 preceding the June commencement at which the degree will be conferred. The copies will then be distributed to the several members of the examining committee. As specified by the Graduate Faculty, the thesis must be typed on the following grades of paper: the original must be green-lined paper of at least sixteen pound weight; the three copies must be on paper of at least thirteen pound weight. Both grades must be of seventy-five per cent rag content.

THE EXAMINING COMMITTEE AND THE EXAMINATION. After consultation with the professor who has directed the thesis, the Dean of the Graduate School appoints an examining committee composed of the director of the thesis and two other members of the Graduate Faculty, one of whom must be from a department other than that of the major.

The candidate appears before this committee for examination, which usually is restricted to the thesis and to the major field, and which lasts for about one and one-half hours.

If the candidate successfully stands his examination, the examining committee certifies to his passing by signing the title page of the thesis. The candidate then returns the original and one carbon copy of the thesis to the Dean of the Graduate School, who deposits them in the University Library.

The Master of Education Degree

PREREQUISITE. The degree of Master of Education is granted ordinarily only to teachers or to others engaged in educational work.

Before a student is admitted to graduate study for this degree, he

should have completed, on the undergraduate level, a minimum of 18 semester hours of approved work in education, including courses in Educational Psychology, and courses in the History of Education, Educational Sociology, or School Administration.

Early in the program of his work, the student must successfully pass two examinations: (1) a test of general ability, and (2) a test designed to determine his ability to write acceptable English. The student, before the degree is conferred, must also present evidence testifying to at least two years of teaching experience, gained either before his admission to course work, or concurrently with it.

REQUIREMENTS FOR THE DEGREE. The M.Ed. degree may be earned either with or without the presentation of a thesis:

WITHOUT THESIS: Students who elect this plan must present a total of 30 semester hours of credit. Twelve hours of this required work must include the four basic courses: Education 204, 210, 217, and 235. If a student, by examination, can demonstrate his competency in the subject matter of two of these courses, he may be granted exemption from the required work in these courses. In no case may he claim exemption from more than two.

Other requirements are: a departmental major (i.e., in Nursing Education, Elementary Education, Public School Administration, Public School Supervision, or Secondary Education) of at least 12 semester hours, and a minor of at least 6 semester hours in a department other than Education. Toward the end of his residence the student must pass a comprehensive examination on his departmental major and on the content of the four basic courses. Permission to take such examinations must be obtained from the Director of Graduate Studies of the Department of Education, and a notice of intention must be filed with him at least three weeks before the announced dates of the examination.

WITH THESIS: Students who elect this plan are permitted to substitute a thesis for 6 semester hours of the required course work. He must also present a thesis subject approved by the Professor of Education who intends to direct it, and by two other members of the staff in Education, including the Director of Graduate Studies. Two of the three members of the approving committee must be permanent members of the Duke University Graduate Faculty. The title of the thesis must be filed with the Dean of the Graduate School at the same time as the titles for the A.M. theses.

In addition to the thesis, the student must present at least 24 semester hours of course credit. Of these, 6 semester hours must be earned in *two* of the basic courses in the Department: Education 204, 210, 217, or 235. Of the remaining 18 or more semester hours, 6 semester hours must constitute a minor taken outside of the De-

partment of Education; at least 12 semester hours must be taken in the student's departmental major.*

The examination on the thesis is similar to that for the Master of Arts degree.

The Master of Arts in Teaching Degree

PREREQUISITES. The degree of Master of Arts in Teaching is designed for both recent graduates of Liberal Arts colleges who wish to enter public school teaching and teachers already in service.

A student should normally have completed a minimum of 12 semester hours in his proposed major subject and an additional 12 semester hours in that or related subjects. In the event that a student wishes to undertake a graduate major different from the undergraduate major, the prerequisites may be modified upon the recommendation of the student's committee and the approval of the Dean of the Graduate School.

PROGRAMS FOR THE DEGREE. One of two programs may be arranged, in consultation with the student's committee:

A. A major in Education of 18 to 24 semester hours and 6 to 12 hours in non-education courses.

B. A major in non-education courses of 18 to 24 semester hours and 6 to 12 semester hours in Education.

In both programs a minimum of 30 semester hours is required.

The non-education courses are to be taken in one or more subjects ordinarily taught in the secondary schools. The amount and distribution of this work will be determined by the needs of the individual student.

The Master of Arts in Teaching may be earned with or without the presentation of a thesis. If a student, in consultation with his committee, elects to present a thesis, 6 semester hours of the total of 30 semester hours required will be allotted to thesis research. He will then be required to complete 24 semester hours of course credits. The regulations concerning the writing and submission of the thesis, and the examination of it, are the same as those governing the thesis for the Master of Arts degree.

THE COMMITTEE. Each candidate for the degree will be assigned a committee, appointed by the Dean of the Graduate School, to plan his program of study. This committee will consist of three members, at least one of whom will be from the Department of Education, and at least one from another department. The chairman of the committee will normally be chosen from the department of the major.

* Those who expect to attend Summer Sessions should consult the statement on pages 57-58 regarding course requirements.

The Doctor of Philosophy Degree

The Ph.D. degree is essentially a research degree. Although course work is a necessary part of the student's program, the mere accumulation of course credits will not be sufficient for attaining this degree. The granting of the Ph.D. is based primarily upon the student's knowledge of a specialized field of study and upon the production of an acceptable dissertation embodying the results of original research.

Before undertaking a program of advanced work toward the Ph.D., the student should consult with the Dean of the Graduate School or the Director of Graduate Studies in his major department to determine the possibility of securing necessary instruction and supervision of research in his field of specialization.

REQUIREMENTS FOR THE PH.D. DEGREE. The formal requirements, discussed in detail below, for the Ph.D. degree are as follows: (1) foreign languages; (2) major and minor courses; (3) supervisory committee for program of study; (4) residence; (5) preliminary examination; (6) the dissertation; (7) the final examination.

FOREIGN LANGUAGES. Normally, a reading knowledge of both French and German is required. Such knowledge is evidenced by the passing of an examination conducted by the appropriate language department at Duke University, in cooperation with the student's major department.*

With the permission of the major department, and with the approval of the Dean of the Graduate School, a student may be allowed to substitute for either of these another language which has a definite relation to the candidate's program of work for the Ph.D. degree. By rule of the Graduate School Faculty, language examinations must be passed before a student takes his preliminary examination. Some departments require the student to master these languages early in the graduate program.

MAJOR AND MINOR. The student's program of study necessarily demands substantial concentration on courses in his major department. Enough work must be taken in one department other than the major department to constitute an acceptable minor. Exceptions which permit both the major and minor within the same department are allowed only by the special permission of the Dean of the Graduate School.

COMMITTEE TO SUPERVISE THE PROGRAM OF STUDY. Ordinarily, during the student's third semester of graduate work a supervisory committee of five members is appointed by the Dean of the Graduate School. This committee, with the professor who is to direct the student's research serving as chairman, formulates the pro-

* See pp. 5-6 for the dates of these examinations.

gram of study, which is submitted to the Dean of the Graduate School for his approval. Of the five members, one must be from a department (usually the minor) other than the major department. This committee, with occasional necessary changes, serves also as the examining committee for both the preliminary and the final Ph.D. examinations.

RESIDENCE. The normal period of residence is not less than three full academic years beyond the B.A. or B.S. degree. A student who already has his A.M. degree may be allowed one year of residence for it, and thus will need to spend a minimum of two additional years in residence.* In unusual cases, a student who has spent the first two years in residence at Duke University may be allowed to take his third year of residence at some other accredited institution. This can be done only with the approval of the major department and of the Dean of the Graduate School. It should be understood that either the first two years or the last year must be spent in actual residence at Duke. Occasionally, because of undergraduate deficiencies, a student may need to spend additional time beyond the minimum residence in preliminary courses (for which he will not receive residence credit) as a background for certain aspects of his graduate program.

Except in unusual cases, graduate work of fragmentary character taken over a long period of years, or work completed many years before the student becomes a candidate for the degree at Duke University, will not be accepted as satisfying the requirements of residence.

CREDIT FOR SUMMER WORK. With the approval of the major department and of the Dean of the Graduate School, credit for a maximum of one year's residence may be granted for work completed in Summer Sessions. A full schedule of summer courses, carried for six weeks, constitutes one-fifth of a year's residence credit.

PRELIMINARY EXAMINATION. Near the end of the second academic year of graduate work (or in special cases early in the third year) the student must take his preliminary examination, which ordinarily covers the field of both his major and minor. Conducted by his Supervisory Committee, the examination is oral, or written, or both, as determined by the Committee. *Upon passing this examination, and not until then, the student is accepted as a candidate for the Ph.D. degree.* Transfer students who may already have passed a preliminary examination at another university must nevertheless take the examination at Duke.

PRIVILEGE OF RE-EXAMINATION. Should the student fail the preliminary examination, he may apply, with the consent of his Supervisory Committee and of the Dean of the Graduate School, for the privilege of a second examination to be taken no sooner than six

* See page 44 for rules regarding transfer of graduate credit.

months after the date of the first. Failure on the second examination will render the student ineligible to continue his program for the Ph.D. degree at Duke University.

THE DISSERTATION. The dissertation is expected to be a mature and competent piece of writing, embodying the results of significant and original research. It must be, in essence, a contribution to knowledge.

The subject for the dissertation must receive the written approval of both the Director of Graduate Studies of the student's major department and of the professor who directs the dissertation. The title of the dissertation must be filed with the Dean of the Graduate School on or before October 15 preceding the June commencement at which the degree is expected to be conferred.

The dissertation must be completed to the satisfaction of the professor who directs it; and four bound, typewritten copies in approved form must be deposited with the Dean of the Graduate School on or before April 15 if the degree is to be granted at the June commencement following.

As specified by the Graduate Faculty, the dissertation must be typed on the following grades of paper: the original must be green-lined paper of at least sixteen pound weight; the three copies must be on paper of at least thirteen pound weight. Both grades must be of seventy-five per cent rag content.

The form of the title page must be approved by the major department and by the Dean of the Graduate School.

A biographical sketch of the author of the dissertation must be bound in at the end of each copy. Ten copies of a brief summary must be submitted with the dissertation.

After the final examination the original and the first carbon copy of the finally approved dissertation are returned to the Dean of the Graduate School, who deposits them in the University Library.

DISSERTATION FEE AND PUBLICATION REQUIREMENT. Not later than May 1 preceding the June commencement when the degree is to be conferred, the candidate must deposit with the Treasurer of the University, a dissertation fee of \$50.00. Should the dissertation be published in a form satisfactory to the professor under whom it was written, and to the Dean of the Graduate School, within a period of three years from the date of the degree, the deposit fee will be returned to the student.

Three copies of each published dissertation must be deposited with the Dean of the Graduate School, as provided by the regulation of the Graduate School Faculty. A suitable abstract or one or more articles in published form may be accepted as satisfying the publication requirements. Three copies of each of these must be deposited with the Dean of the Graduate School.

If the dissertation is not published within a three-year period under the conditions stated above, the deposit fee is forfeited and is credited to a Special Dissertation Fund, which is used for subsidizing the publication of such dissertations as are recommended by the Graduate School Faculty.

FINAL EXAMINATION. The final oral examination shall be primarily on the dissertation. Questions may, however, be asked in the candidate's major field. Normally, one year must elapse between the dates of the preliminary and the final examinations.

If a student fails his final examination, he may be allowed to take it for a second time, but not sooner than six months from the date of his first. Permission to take the second examination must be obtained from the professor who directed the dissertation and from the Dean of the Graduate School. Failure to pass the second examination renders the student ineligible to continue work for the Ph.D. degree at Duke University.

The Doctor of Education Degree

The Doctor of Education is a professional degree and is granted only to those who are, or intend to become, public school administrators.

ADMISSION. The candidate for the Ed.D. degree must meet the same requirements for admission to the Graduate School as the candidate for the Ph.D. degree. In addition to these uniform requirements, the candidate for the Ed.D. (1) must have had at least three years of experience in public school work, preferably in school administration; (2) must make a satisfactory mark on a psychological examination, and demonstrate, by examination, his ability to write good English; (3) must present strong letters of appraisal and recommendation from persons well qualified to speak with authority of his abilities; and (4) must present himself, if possible, for a personal interview. The Standing Committee on the Ed.D. degree reserves the right to insist upon an interview.

RESIDENCE. A minimum period of residence equivalent to three academic years beyond the B.A. or B.S. degree is required for the Ed.D. degree. Either the first two years or the last year must be taken at Duke, and the candidate must spend at least two consecutive semesters at Duke. Occasionally, because of undergraduate deficiencies, a student may need to spend additional time beyond the minimum residence in preliminary courses (for which he will not receive residence credit) as a background for certain aspects of his graduate program.

Except in unusual cases, graduate work of fragmentary character taken over a long period of years, or work completed many years before

the student becomes a candidate for the degree at Duke University, will not be accepted as satisfying the requirements of residence.

ACCEPTABLE MARKS ON FIRST YEAR'S WORK. In order to be considered for candidacy for the Ed.D. degree, the student must have passed all of his course work in the first year of graduate study; on at least 9 semester hours he must have made a grade of "G" or better.

PRELIMINARY EXAMINATION. By the end of his second year of residence the candidate for the Ed.D. degree will take a preliminary examination similar in scope to that described for the Ph.D. degree. Only after he passes this examination, will he be considered a candidate for the degree.

DISSERTATION FEE AND PUBLICATION REQUIREMENT. The dissertation fee and the publication requirement are the same as those for the Ph.D.

DISSERTATION AND FINAL EXAMINATION. The candidate must write a dissertation which demonstrates his ability to investigate and report on some significant phase of public school administration. The details of dissertation presentation, including its defense in a final examination, are the same as those for the Ph.D. degree.

AWARDING OF THE DEGREE. After the completion of the formal academic requirements for the Ed.D. degree, the candidate must devote at least one year of apprenticeship in a public school system, under conditions which assure appropriate supervision of the candidate's activities. The Standing Committee on the Ed.D. degree will decide the adequacy of this training. The degree will not be formally awarded until after the successful completion of this apprenticeship.

PROGRAM OF WORK. The details of the program of work are determined for each candidate by the Standing Committee for the Ed.D. degree. In general, the first year of work follows the program laid down for the M.Ed. degree. In the second and third years, work in Public School Administration is organized on the basis of seminars, rather than separate courses. This professional, specialized study accounts for about one-third of the course work. The other two-thirds is divided almost equally between the general field of Education and related work.

MAJOR AND MINOR. The major field is Public School Administration. The minor, or related work, amounting to at least 24 semester hours, must be taken in economics, political science, and sociology. Courses necessary for the student's program which lie outside these fields must receive the approval of the Standing Committee.

General Regulations

GRADUATE CREDIT FOR COURSES TAKEN IN THE SCHOOL OF LAW. Upon the recommendation of the Director of Graduate Studies, and upon the approval of the Dean of the Graduate School, students in the Social Sciences may take certain courses in the School of Law for graduate credit. In exceptional instances courses in the School of Law may be considered as fulfilling a student's requirements for a minor.

SIZE OF CLASSES. Classes which carry graduate credit are limited in size to twenty-five students. In exceptional cases this regulation may be modified, but only by permission of the Executive Committee of the Graduate School Faculty on the recommendation of the department concerned.

GRADING OF GRADUATE STUDENTS. Grades in the Graduate School are as follows: "E," "G," "S," "F," and "Inc." "E" (exceptional) is the highest mark. "G" (good) and "S" (satisfactory) are the remaining passing marks. "F" (failing) is below passing, and "Inc." (incomplete) indicates that some portion of the student's work is missing, for a satisfactory reason, at the time the grades are made out. The professor who gives an "Inc." specifies the date by which time the student must have made up the deficiency. In no case may an extension be granted beyond one calendar year from the date the course ended. No residence credit can be granted for that portion of a student's program which lapses because of incomplete marks.

CHARGE FOR REQUESTED TRANSCRIPTS. A student who wishes to transfer his credits from Duke University to another institution is entitled to one free transcript of his record. A fee of one dollar, payable in advance, is charged for each additional copy.

TRANSFER OF GRADUATE CREDITS. Credit for graduate course work earned at another institution will be determined only after a student has spent one semester at Duke University. After completing his first semester, the student should file a request that his credits be reviewed and a decision made.

WITHDRAWAL FROM GRADUATE SCHOOL. If a student wishes to withdraw from the Graduate School, he should notify both the Director of Graduate Studies in his major department and the Dean of the Graduate School.

GRADUATE CREDIT EARNED BEFORE A.B. DEGREE IS GRANTED. Ordinarily no credit for graduate courses earned before a student has been awarded his A.B. or B.S. degree will be allowed. However an undergraduate student at Duke University, who, at the beginning of a semester, lacks no more than 9 semester hours for fulfilling the requirements for the A.B. or B.S. degree, may obtain per-

mission from the Dean of the Graduate School to enroll for graduate courses sufficient to bring his total program to fifteen hours a week. Such graduate courses will be credited toward the A.M., M.Ed., or M.A.T., provided that the student meets the requirements for admission to the Graduate School, and that he is duly registered in the Graduate School at the beginning of that term.

Awards and Fees



Fellowships, Scholarships, and Assistantships

FOR the encouragement and financial assistance of graduate students of high character and marked ability, Duke University has established a considerable number of fellowships, scholarships, and assistantships. The stipends for these range from \$470 to \$2,000. Holders of grants pay tuition and other fees regularly required of all graduate students.

Fellows and scholars pay full tuition and fees and are registered for a full schedule of course work and receive full residence credit. Assistants, in general, pay four-fifths tuition and fees, are registered for a four-fifths schedule, and receive four-fifths residence credit.

APPLICATION FOR GRANTS. Applications for these grants, along with all supporting documents, must be submitted on or before March 1. Notification of awards is made about April 1. Late applications will be considered, should any vacancies occur in the list of appointees. No appointment is made for longer than one academic year.

Further information and application forms may be obtained from the Dean of the Graduate School, Duke University.

Grants offered for 1954-55 are:

FELLOWSHIPS. One Angier Duke Memorial Fellowship of \$2,000; twenty-four University Fellowships with stipends ranging from \$1,000 to \$1,800; three Gurney Harriss Kearns Fellowships in Religion of \$1,200 each.

GRADUATE ASSISTANTSHIPS. Approximately one hundred and ten appointments as departmental assistants or readers will be available for graduate students. The compensation will usually range from \$800 to \$1,800 depending upon the nature and amount of the work assigned.

GRADUATE SCHOLARSHIPS. Thirty scholarships with stipends varying from \$470 to \$1,500 each.

CHARLES W. HARGITT RESEARCH FELLOWSHIP IN ZOOLOGY. The Charles W. Hargitt Fellowship in Zoology is limited to research in the field of cellular studies. It is primarily for post-doctoral applicants and established investigators on sabbatical leave who desire to engage in full-time research. The stipend will

vary, depending upon previous training and experience, but in general will provide an income equivalent to that of a first year instructor and may be higher in the case of established investigators.

The recipient will have no departmental duties, but space and facilities will be provided.

The fellowship may occasionally be granted to a pre-doctoral applicant in his final year of graduate work who has met all degree requirements other than completion of research, and whose research gives promise of unusual merit.

Appointment is for one year with the possibility of reappointment. Inquiries and applications should be made to Dr. Henry S. Roberts, Department of Zoology, Duke University, Durham, North Carolina.

FELLOWSHIPS AND GRADUATE SCHOLARSHIPS IN FORESTRY. Information regarding special fellowships and graduate scholarships in forestry may be obtained from the Dean of the School of Forestry, Duke University, Durham, North Carolina.

SIGMA XI PRIZE AWARDS. The Society of Sigma Xi offers each year a prize for a Master's thesis and a prize for a Ph.D. dissertation in the fields of botany, chemistry, forestry, mathematics, medicine, physics, psychology, and zoology. The student must be in residence during the academic year in which the prize is awarded. Students holding graduate appointments are eligible to compete, but instructors, part-time instructors, and interns are not eligible. The department concerned makes the nomination. Full particulars may be obtained from the secretary of the chapter. Nominations, recommendations, copies of theses, reports, or other materials must be in the hands of the secretary on or before May 1. All papers should be submitted in duplicate.

Tuition, Fees, and Expenses

GENERAL FEES IN THE ACADEMIC YEAR. The following table shows the general fees and charges collected from all students. All fees for each semester are due and payable, unless otherwise specified, at the time of registration at the beginning of that semester. No student is admitted to classes until arrangements have been made with the Treasurer of the University for the settlement of fees.

Tuition, per semester.....	\$175.00
General Fee,* per semester.....	60.00
Athletic Fee, not including Federal Tax, Optional, per year, payable in the fall semester	10.00
Room-rent—See detailed statement below.	
Special Dissertation Fee, payable by candidates for the Ph.D. degree, on or before the May 1 preceding the granting of the degree.....	50.00

* General Fees, in lieu of most special charges, include the following fees: Matriculation, Medical, Library, Damage, Commencement, Diploma, and an average of the Laboratory and Materials Fees.

Living Accommodations

Women graduate students occupy Epworth Hall on the Woman's College Campus, which provides facilities for fifty-seven women. There is no dining room in Epworth Hall, but meals may be had in the cafeterias of the Unions. Rooms in Epworth Hall rent for one hundred fifty dollars (\$150.00) each semester for a room for two persons or seventy-five dollars (\$75.00) each occupant each semester and one hundred dollars (\$100.00) for a single room.

The Men's Graduate Center containing bedroom facilities for four hundred men, complete with lounges, study rooms, recreational rooms, post office and dining hall, is available to men of the graduate and professional schools. The rooms are equipped for two persons and the rental charge is one hundred twenty-five dollars (\$125.00) each semester or sixty-two dollars and fifty cents (\$62.50) each person each semester.

Rooms are rented for no shorter period than one semester or, in the case of a medical student, one quarter, unless by special arrangement with the Housing Bureau. A period of occupancy other than a semester or quarter and without special arrangement will be charged at a minimum rate of twenty-five dollars (\$25.00) or at a rate of one dollar each day of occupancy.

Room reservations are made with the Duke University Housing Bureau only after official acceptance for admission by the University. A twenty-five dollar (\$25.00) room deposit is required from all Resident Hall applicants before reservation of room will be made. The initial room deposit is effective for the entire college course for the student whose attendance during regular terms is continuous. The room deposit will be refunded within thirty days after graduation upon the request of the student. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit is refundable provided the Housing Bureau is notified at least sixty days prior to the beginning of the semester for which the room is reserved. A resident student, in order to retain his room for the succeeding academic year, must make application at the office of the Housing Bureau for confirmation of the reservation in accordance with the plan that is published during the school year.

The exchange of rooms may be arranged at the Housing Bureau within fifteen days after the official opening of the semester or quarter of the school term. Thereafter a charge of two dollars (\$2.00) may be made. Persons exchanging rooms without the approval of the Housing Bureau will be subject to charges for both rooms.

The authorities of the University do not assume responsibility for the persons selected as roommates. Each student is urged to select the roommate when the room is reserved.

Beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are furnished by the University. The student supplies linens, blankets and pillows. Rugs, if desired, are not to exceed fifty (50) square feet in size.

Regulations governing the occupancy of rooms will be supplied directly from the Housing Bureau when room reservations are made. Occupants are expected to abide by these regulations.

BOARD. Food service on both the Woman's College Campus and the West Campus is cafeteria style. The cost of meals approximates \$1.75 to \$2.25 per day depending upon the need and taste of the individual. The dining facilities on the West Campus include three cafeterias with multiple choice menus and, in addition, the Oak Room, where full meals and *a la carte* items are served. The Men's Graduate Center has a cafeteria open at meal hours, and a coffee lounge which is open until 11:00 P.M. The prices are the same as in the West Campus Union.

ESTIMATED EXPENSES IN THE ACADEMIC YEAR. The necessary expenses of a graduate student are moderate. The University dormitories and Unions provide comfortable and wholesome living conditions at a minimum cost. Incidental expenses for recreation, traveling, clothes, and other items naturally depend on the tastes and habits of the individual. The table below lists the necessary college expenses for one year for a full program of work:

	<i>Low</i>	<i>Moderate</i>	<i>Liberal</i>
Tuition	\$ 350.00	\$ 350.00	\$ 350.00
General Fee	120.00	120.00	120.00
Room-rent	125.00	150.00	200.00
Board	400.00	450.00	500.00
Laundry	25.00	30.00	35.00
Books	30.00	40.00	50.00
	<u>\$1,050.00</u>	<u>\$1,140.00</u>	<u>\$1,255.00</u>

Due to rising costs it may be necessary to consider some readjustment of charges. In the event of an adjustment applicants will be notified.

PAYMENTS TO HOLDERS OF GRANTS. Payments of stipends to holders of fellowships and scholarships are made by the University Treasurer in four equal installments, at approximately the middle and end of each semester. Payments to graduate assistants are made in eight monthly installments, payable on the 15th of each month beginning October 15. Arrangements may be made to pro-rate tuition charges on the same basis.

SPECIAL CHARGES FOR TEACHERS AND OTHERS. In order to assist North Carolina teachers in their professional preparation, Duke University grants a special tuition rate to members of the faculties of neighboring public schools and colleges, currently engaged

in full-time teaching while taking courses in the Graduate School of Arts and Sciences.

Other persons eligible for these special fees include full-time employees of Duke University who are paid on a monthly basis throughout the year, ministers of neighboring churches, and wives of Duke faculty members. In no instance do these reduced rates apply to teachers and ministers while on leave of absence.

Such persons may enroll for one or two courses (in no case totalling more than 7 semester hours per semester) upon the payment of a fee of \$5.00 for registration for each semester and a tuition fee of \$5.25 per semester hour of credit.

These special fees do not apply to the holders of fellowships, scholarships, or assistantships, or to part-time instructors.

The student must meet the same admission standards required of all graduate students. No more than two-fifths residence credit per year may be earned under this reduced-tuition arrangement.

Facilities for Graduate Study



The Libraries

THE University Libraries contained 1,125,450 volumes on July 1, 1953. In addition to the collections in the General Library, there are eight school and departmental libraries: Divinity, 63,000 volumes; Engineering, 20,000 volumes; Law, 101,300 volumes; Medical, 54,000 volumes; Woman's College 98,000 volumes; Biology-Forestry 49,000 volumes; Chemistry, 15,550 volumes; Mathematics-Physics, 16,100 volumes. In 1952-53 40,450 volumes were added; 3,950 periodicals and 69 newspapers are received currently.

The General Library building, which was doubled in size in 1949, incorporates many modern arrangements for the preservation of the collections and for the convenience of the research scholar. Book stacks, storage areas, and quarters for rare books and manuscripts are air-conditioned. In the stacks, 250 carrells are available to graduate students as places of study, and a large reading room on the first floor of the building is reserved for graduate students. Upon application, graduate students may receive permit cards entitling them to use of the stacks.

A division of photographic services, with the most modern cameras and other equipment for microfilming or other photographic reproduction of printed and manuscript materials, provides a battery of reading machines to serve the Library's large collection of microfilms of rare books, periodicals, and newspapers.

The extensive resources of the Library for research students may be suggested by the following special collections:

THE TRENT COLLECTION OF WALT WHITMAN, containing the first and all other important early editions or issues of *Leaves of Grass*; books and articles of Whitman biography and criticism; nearly 300 manuscripts and 400 letters; and pictures, sheet music and other miscellanea.

THE GEORGE WASHINGTON FLOWERS COLLECTION of books, manuscripts, pamphlets, and newspapers on all phases of Southern history.

THE ARENTS COLLECTION of several hundred volumes relating to the culture and production of tobacco and the manufacture and distribution of tobacco products.

THE JAMES A. THOMAS COLLECTION of books on Chinese history and culture.

THE GUIDO MAZZONI LIBRARY, a collection of approximately 23,000 volumes and 67,000 pamphlets covering the whole range of Italian literature, with special strength in the nineteenth century.

THE GUSTAVE LANSON LIBRARY of 12,000 books and monographs on French literature.

LATIN-AMERICAN COLLECTIONS, built around a special Peruvian library of 7,000 books and manuscripts, a Brazilian library of several thousand volumes, and an Ecuadorian library of 2,000 volumes, supplemented by strong collections of the public documents of these and other Latin-American countries.

THE ROBERTSON LIBRARY of Philippiniana.

THE FRANK C. BROWN FOLKLORE COLLECTION, consisting of about 38,000 manuscript pieces, 1,400 vocal recordings, and 650 musical scores of North Carolina folklore.

THE STRISOWER LIBRARY of International Law, numbering about 5,000 volumes, with many rare books and periodical files.

THE HOLL CHURCH HISTORY LIBRARY, dealing primarily with the period of the Reformation.

COLLECTIONS IN ENGLISH AND AMERICAN LITERATURE, where emphasis has been placed principally on the eighteenth and nineteenth centuries, with collections of Swinburne, Tennyson, Rossetti, and Bryant, significant groups of annotated copies and first editions of Coleridge and Byron, the Carroll Wilson collection of Emerson, some 5,000 items of eighteenth-century English poetry and prose, and the Paul Hamilton Hayne library of American literature.

In addition to these and other special collections, the Libraries contain excellent files of United States federal and state documents, public documents of many European and Latin-American countries, and publications of European academies and learned societies. The newspaper collection, with 13,000 volumes and 3,600 reels of microfilms, has several long eighteenth-century files, strong holdings of nineteenth-century New England papers, and of ante-Bellum and Civil War papers from North Carolina, South Carolina, and Virginia; there are also many European and Latin-American papers. The manuscript collection of more than 1,500,000 items is particularly strong in all phases of the history, politics, and social and economic life of the South Atlantic region, though it includes also significant papers in English and American literature, and several notable medieval manuscripts in both Greek and Latin.

HISPANIC STUDIES PROGRAM. The Graduate School offers an inter-departmental program of Hispanic studies leading to the A.M.

and Ph.D. degrees. Students may write their theses and take their degrees in history, economics, political science, sociology, and Hispanic languages and literatures. The purpose of the program is to make possible desirable combinations of courses on the Hispanic world in these related disciplines and to bring to bear more strength of the faculty upon the training of a single candidate. This may be achieved through a judicious use of minors or by such special arrangements as may from time to time become necessary.

The Duke University Library holdings have been built up to facilitate graduate work and research in Hispanic-American cultural history, inter-American relations, economic history, politics, and Spanish-American literature. These collections are being constantly enlarged.

Science Laboratories

BOTANICAL AND ZOOLOGICAL LABORATORIES. Facilities for graduate study in the Department of Botany and Zoology are found on both the East and the West Campuses. In addition to well-equipped laboratories for teaching and research in the various fields of botany and zoology, special facilities, such as animal rooms, green-houses, darkrooms, a small shop, a refrigerated room, and air-conditioned rooms, are available.

The Botany Herbarium, containing over 150,000 specimens, is particularly strong in material from the Southeast and includes notable collections of mosses, ferns, and grasses. The Biology-Forestry Library contains an outstanding collection of books and serials, including most of the important American and foreign periodicals, in botany, forestry, zoology and related fields.

Unique assets for teaching and research are the Sarah P. Duke Gardens, conveniently accessible on the West Campus; the Duke Forest, comprising some eight thousand acres of woodland adjacent to the West Campus; and the Duke University Marine Laboratory at Beaufort, North Carolina. The marine station is exceptionally well located for the study of animal and plant life in the ocean and in the coastal plain area. Graduate courses of instruction are given at the Marine Laboratory during the summer months; research facilities are available throughout the year.

Scholarships for advanced study during the summer months are maintained at the Highlands Laboratory, Highlands, North Carolina, at the Marine Biological Laboratory, Woods Hole, Massachusetts, and ten scholarships are offered at the Duke University Marine Laboratory at Beaufort. Requests for information concerning the scholarships at the Highlands Laboratory should be addressed to the Botany Department, those concerning scholarships at Woods Hole to the Zoology Department, and those concerning scholarships at Beaufort to Dr.

C. G. Bookhout, Director of the Marine Laboratory, c/o the Zoology Department.

PHYSICAL LABORATORIES. A new and completely modern Physics building with 62,500 square feet of floor space, has recently been completed.

In addition to the lecture halls and the elementary laboratories, the building includes special laboratories for work in electrical measurements, electronics, microwaves, optics, atomic and nuclear physics, low temperature physics, and mechanics, and a new laboratory for training in radioactive measurements. Special equipment includes: a 21-foot concave grating and other instruments for visible, ultraviolet, infrared, and Raman spectra; instruments for research in microwaves and microwave spectroscopy; crystal counters, proportional counters, ion chambers for use in cosmic ray and nuclear research; a four-million volt Van de Graaff accelerator, and associated equipment for nuclear physics research; a helium liquefier, and other cryogenic equipment.

The Physics building contains a departmental library, a liquid air plant, and shop staffed by four instrument mechanics, two electronic mechanics, and a glass blower.

CHEMICAL LABORATORIES. Graduate work in chemistry is carried on in a modern building with a floor area of about 57,000 square feet. Of this total space a large proportion is available for research and advanced teaching. A number of specially designed rooms are available for present or future research, such as a photographic room, constant temperature room, and rooms equipped for dielectric constant and infrared, visible and ultraviolet spectrophotometric measurements.

A glassblowing room and a well-equipped shop, operated by a competent mechanic, provide facilities for the construction of special apparatus and for the repair and maintenance of instruments.

A departmental library located in the building provides reference material for all ordinary needs.

PSYCHOLOGY LABORATORIES. Graduate work in psychology is carried on in two adjacent buildings providing about 16,000 square feet of floor space. Over twenty rooms are devoted to research. In addition to general research space, a number of rooms are specifically equipped for research in perception, visual processes, and human and animal learning. Additional special apparatus includes automatic computation equipment for research in test construction. A departmental shop, with a competent technician in charge, is maintained for the design, construction, and maintenance of special apparatus.

A number of clinical installations for adults and children, devoted to an extensive range of clinical and guidance problems, cooperate with the Department in providing additional facilities for training and

research in clinical psychology. In addition, a nursery school is maintained in the laboratory.

MEDICAL SCHOOL. In the School of Medicine elaborate facilities are provided for post-graduate research in the various branches of medical science. The Departments of Anatomy, Bacteriology, Mycology and Immunology, Biochemistry and Nutrition, and Physiology and Pharmacology offer certain courses and research facilities to students in the Graduate School of Arts and Sciences. The Duke Hospital Library is available to all graduate students.

Oak Ridge Institute of Nuclear Studies

Duke University is one of the sponsoring universities of the Oak Ridge Institute of Nuclear Studies located at Oak Ridge, Tennessee. Through this cooperative association with the Institute, the graduate research program has at its disposal all the facilities of the National Laboratories in Oak Ridge and of the research staffs of these laboratories.

Duke Forest

The Duke Forest consists of approximately 7,600 acres of land, most of which is adjacent and easily accessible to the University campus. Situated in the lower Piedmont region and composed of second-growth shortleaf pine, loblolly pine, and hardwoods, the Forest is representative of the various types of timber growth and soils found throughout the region. Through placing the Forest under intensive management for forestry purposes, substantial progress has been made in developing the educational work and research in forestry.

The proximity of the Forest to the laboratories, greenhouses, and library facilities of the University provides an excellent opportunity for advanced study and research in forestry. Research, particularly in the fields of silvics, forest soils, silviculture, forest management, properties of wood, forest-tree physiology, forest entomology, and forest pathology, is well under way. Several members of the botany and zoology staffs are also engaged in research in the Duke Forest.

Cooperative Programs with the University of North Carolina

INTERCHANGE OF REGISTRATION. Under a plan of cooperation between the greater University of North Carolina and Duke University, students regularly enrolled in the Graduate School of the greater University during the regular academic year, and paying full

fees to that institution, may be admitted to a maximum of two courses per semester in the Graduate School of Duke University upon payment of a nominal registration fee of two dollars and of any other special fees regularly required of all students. Under the same arrangements, students in the Graduate School of Duke University may be admitted to course work at the greater University of North Carolina.

LIBRARY EXCHANGE. Students of both the University of North Carolina and Duke University are granted certain library privileges in the respective libraries of each University. Books unavailable in one library may be procured at short notice through an interlibrary loan service.

Research and Publication

The several departments of the University are devoted to research investigation as well as to instruction. Since the University exists for the promotion and diffusion of knowledge, attention is rightly placed, in the Graduate School, on research activities.

In furtherance of the University's obligation to promote and diffuse knowledge, the President annually appoints a University Council on Research, which receives applications from members of the various faculties for subsidies in support of research. Vigorous and forward-looking policies of this Research Council have initiated and encouraged the completion of many substantial and important research projects.

The Duke University Press takes its place as a significant agency in the diffusion of knowledge. Created in 1926, as a successor to the Trinity College Press, the Duke University Press immediately revived the *Hispanic-American Historical Review*, which had been founded and published from 1918 to 1922 by a group of scholars interested in Hispanic America. In 1929 *American Literature* was begun with the cooperation of the American Literature Group of the Modern Language Association. This journal was followed in 1931 by *Ecological Monographs*, and in 1932, *Character and Personality* (since 1945 the *Journal of Personality*). In 1935 the Press began the publication of the *Duke Mathematical Journal*; in 1937, the *Journal of Parapsychology*. The Law School of Duke University publishes *Law and Contemporary Problems*.

The Press, since its organization, has published more than two hundred volumes, and has thus made public the fruits of scholarly research of the Duke faculty and of scholars elsewhere. In the broadest sense, the policy of the Press is to make available to the public any scholarly work that merits publication though special attention is given to works in domains of knowledge cultivated by the University and to works pertaining to the region south of the Potomac.

Appointments Office

Duke University maintains an active appointments office which has steadily been placing students in teaching and industrial positions. The services of this office are available without charge to graduate students. Those who are interested in securing employment through the Appointments Office, or those who wish to have available for their own use in securing employment a complete file containing their academic record and pertinent recommendations, should register in this office.

Foreign Students

It is the policy of the Graduate School to admit qualified foreign students to course work and in many instances to candidacy for a degree. In making application the student should follow the same procedures as are required of all other graduate students.

The foreign student whose native language is not English must submit, with his application, a statement by a qualified official that the applicant can read, write, speak, and understand English well enough to pursue a program of graduate study. If the applicant is deficient in this respect he must remove his deficiency before he can be accepted in the Graduate School. He must also present a statement certified by a responsible official that his finances are sufficient to maintain him during his stay at Duke University. Unless specific arrangements have been made for a scholarship, the student must pay the regular fees.

Graduate Study in the Summer Session

The Summer Session of Duke University is divided into two terms of six weeks each. In 1954 the first term begins on June 9 and ends on July 17. The second term begins on July 20 and ends on August 27.

Graduate students who wish to work toward advanced degrees in the Summer Session, particularly in chemistry, economics, education, English, history, mathematics, religion, sociology, Spanish, and zoology will find a selection of courses offered by members of the Duke faculty and by visiting professors. Other departments ordinarily offering work leading to the A.M. degree are botany, political science, and psychology. Thesis research for advanced graduate students is available also in other departments, such as botany, forestry, and physics.

Requirements for admission to the Graduate School are detailed above. Students who wish to be admitted to the Graduate School for work in the Summer Session should make application to the Dean of

the Graduate School, as well as to the Director of the Summer Session, and should return the completed application, with supporting documents, before June 1, for admission to the first term, and before July 10, for admission to the second term.

REGULATIONS REGARDING SUMMER WORK. (a) No graduate student may register for more than six semester hours of credit in one Summer Session term of six weeks. (b) All of the work required for the A.M., M.A.T., or M.Ed. degree must be completed within six years of the date of beginning. No work completed earlier than this time limit can be accepted either for course or residence credit. (c) Not more than one year of summer work can be accepted toward the residence requirements for the Ph.D. or Ed.D. degrees. See p. 40 for a definition of a year's residence credit earned in Summer Sessions.

A Summer Session Bulletin containing information about graduate courses may be obtained by addressing a request to the DIRECTOR OF THE SUMMER SESSION, Duke University, Durham, N. C.

Courses of Instruction



Most courses listed in this Bulletin are given on the West Campus. The letter (E) following the description means that the course is offered on the East Campus. In general, courses with odd numbers are offered in the first semester, those with even numbers in the second semester. The courses listed under the headnote to the several departments are those planned at the date of printing the Bulletin. Occasional changes may later be necessary.

AESTHETICS, ART, AND MUSIC

ASSOCIATE PROFESSOR MARKMAN

No graduate degree is offered in this department, but the following courses are suggested as possible minors for students majoring in history, literature, philosophy, religion, psychology, or sociology, or in any other interested departments.

In 1954-55 the courses planned are 215 and 216.

215. RELIGIOUS ART OF THE ANCIENT NEAR EAST.—The development of art, particularly architecture and sculpture, as the material expression of religious ideas in Egypt, Mesopotamia and in part Syria and Palestine to the Persian conquest. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

216. RELIGIOUS ART OF THE CLASSICAL WORLD.—The religious art, particularly architecture and sculpture, of Greece and Rome with special emphasis on the monuments in the Near East. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

217. AEGEAN ART.—A study of the problems of Aegean art as the forerunner of Greek art and in relation to the contemporary civilizations of the eastern Mediterranean world. Open to graduate students, seniors and, after consultation with the instructor, to juniors. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

218. EARLY GREEK ART.—A study of the problems of the origin and development of Greek art in the geometric period to the end of the archaic. Open to graduate students, seniors and, after consultation with the instructor, to juniors. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

DIVISION OF ANCIENT LANGUAGES AND LITERATURE

PROFESSORS CLARK, ROGERS, AND STINESPRING; ASSOCIATE PROFESSORS ROSE AND TRUESDALE;
ASSISTANT PROFESSORS BROWNLEE AND WAY

GREEK

No graduate degree is presently offered in Greek.

For 1954-55 the course planned is 257.

FOR SENIORS AND GRADUATES

201-202. GREEK TRAGEDY.—6 s.h.

ASSOCIATE PROFESSOR TRUESDALE

257. SOCIAL AND CULTURAL HISTORY OF THE HELLENISTIC WORLD FROM ALEXANDER TO AUGUSTUS.—Lectures, readings, and discussions. This course will not be separately credited without the sequel, Latin 258. 3 s.h.

PROFESSOR ROGERS

Graduate students of Duke University may attend the American School of Classical Studies in Athens, Greece, without charge for tuition, and they are eligible to compete for the fellowships that are offered annually by the School. These consist

of two fellowships in Greek archaeology, and one in the language, literature, and history of ancient Greece, each with a stipend of \$2,000. They are awarded mainly on the basis of examinations held in the beginning of February of each year.

LATIN AND ROMAN STUDIES

No graduates degree is presently offered in Latin.

The course planned for 1954-55 is 258.

FOR SENIORS AND GRADUATES

211-212. ROMAN ORATORY.—A survey of the history of Roman oratory, centering about the *Brutus* of Cicero and Tacitus' *Dialogus*. 6 s.h. PROFESSOR ROGERS

258. SOCIAL AND CULTURAL HISTORY OF THE GRAECO-ROMAN WORLD.—The Roman Empire as the trustee of Hellenism and Christianity, and its own original contributions to modern civilization; lectures, readings, and discussions. This course continues Greek 257 and will not be separately credited. 3 s.h. PROFESSOR ROGERS

SEMITICS

The courses planned for 1954-55 are 201-202, 207-208, 305, 307, 309.

FOR SENIORS AND GRADUATES

201-202. FIRST HEBREW.—The principles and structure of the Hebrew language, with translations of selected Old Testament narratives. 6 s.h. PROFESSOR STINESPRING

205-206. ELEMENTARY ARABIC.—Introduction to the classical language and literature, with some attention to the modern colloquial idiom. 6 s.h. PROFESSOR STINESPRING

207-208. SECOND HEBREW.—Samuel or Kings the first semester; Isaiah the second. 6 s.h. ASSISTANT PROFESSOR BROWNLEE

FOR GRADUATES

304. ARAMAIC.—A study of the Aramaic portions of the Old Testament and selected passages from the Targums, Midrashes, and Talmuds. 3 s.h. PROFESSOR STINESPRING

305. THIRD HEBREW.—A study of late Hebrew prose, with readings from Chronicles, Ecclesiastes, and the Mishnah. Hours to be arranged. 3 s.h. PROFESSOR STINESPRING

307. SYRIAC.—A study of the script and grammar, with readings from the Syriac New Testament and other early Christian documents. Some knowledge of Hebrew and Aramaic is prerequisite. 3 s.h. PROFESSOR STINESPRING

309. HISTORY OF THE ANCIENT NEAR EAST.—A survey of the early civilizations of Egypt, Palestine, Syria, and Mesopotamia in the light of Biblical archaeology. 3 s.h. PROFESSOR STINESPRING

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 217, Religion 217, 218, 220, 313, 316, 318.

Under the terms of a co-operative agreement graduate students of Duke University may, with the approval of the chairman of their major department, take any graduate course offered by the Departments of Greek and Latin of the University of North Carolina by the payment of a nominal fee. A list of these courses will be sent upon request.

BOTANY

PROFESSOR BLOMQUIST, CHAIRMAN—203 BIOLOGY BUILDING; PROFESSOR KRAMER, DIRECTOR OF GRADUATE STUDIES—04 BIOLOGY BUILDING; PROFESSORS HARRAR, OOSTING, AND WOLF; ASSOCIATE PROFESSORS ANDERSON, BILLINGS, NAYLOR, AND PERRY; ASSISTANT PROFESSOR PHILPOTT

Graduate work in the Department of Botany is offered leading to the A.M. and Ph.D. degrees. Before undertaking graduate study in botany a student should have

had in his undergraduate program at least 12 semester hours of botany beyond an elementary course, and related work in biological sciences. Some work in chemistry and physics will be desirable; and for some phases of botanical study, a necessity. The student's graduate program is planned to provide a broad basic training in the various fields of botany, plus intensive specialization in the field of the research problem.

The courses planned for 1954-55 are 202, 216, 221, 222, 224, 225-226, 253, 255, 256, 258, 259, 359-360, 397-398.

FOR SENIORS AND GRADUATES

202. GENETICS.—The principles of heredity, their cytological basis, and their bearing on other fields of biology. Laboratory work involves experimental breeding of the fruit fly and interpretation of data from the breeding of plants. Offered in alternate years. Prerequisites: one year of botany, zoology, or equivalent, and college algebra. 4 s.h. ASSOCIATE PROFESSOR PERRY

203. PLANT CYTOLOGY.—A study of the structure and organization of plant cells in relation to growth, reproduction, and especially heredity. Offered in alternate years. Prerequisite: one year of botany. 4 s.h. ASSOCIATE PROFESSOR ANDERSON

204. ADVANCED PLANT ANATOMY.—The structure of vegetative and reproductive organs of seed plants. Physiological and ecological implications of structure are stressed. Offered in alternate years. Prerequisite: Botany 55 or equivalent. 4 s.h.

216. BOTANICAL MICROTECHNIQUE.—Studies in methods of preparing temporary and permanent microscopical slides; theory of staining; the use of the microscope, especially microscopical measurements, drawing, and photomicrography; botanical photography, and lantern slides. Prerequisite: two semesters of botany. 4 s.h. ASSOCIATE PROFESSOR ANDERSON

221. STRUCTURE AND CLASSIFICATION OF FUNGI.—Prerequisite: two semesters of botany. 4 s.h. PROFESSOR WOLF

222. PHYSIOLOGY AND ECOLOGY OF FUNGI.—Prerequisite: Botany 221 or equivalent. 4 s.h. PROFESSOR WOLF

225-226. SPECIAL PROBLEMS.—Students with adequate training may do special work in the following fields. Credits to be arranged.

(a) BACTERIOLOGY, MYCOLOGY, AND PLANT PATHOLOGY.

PROFESSOR WOLF

(b) CYTOLOGY.

ASSOCIATE PROFESSOR ANDERSON

(c) ECOLOGY.

PROFESSOR OOSTING AND ASSOCIATE PROFESSOR BILLINGS

(d) GENETICS.

ASSOCIATE PROFESSOR PERRY

(e) MORPHOLOGY AND ANATOMY OF HIGHER PLANTS.

PROFESSORS HARRAR AND OOSTING; ASSISTANT PROFESSOR PHILPOIT

(f) MORPHOLOGY AND TAXONOMY OF LOWER GROUPS.

PROFESSOR BLOMQUIST AND ASSOCIATE PROFESSOR ANDERSON

(g) PHYSIOLOGY.

PROFESSOR KRAMER AND ASSOCIATE PROFESSOR NAYLOR

(i) TAXONOMY OF HIGHER GROUPS.

PROFESSOR BLOMQUIST

252. ADVANCED PLANT PHYSIOLOGY.—The physicochemical processes and conditions underlying the physiological processes of plants. Prerequisite: Botany 151 or equivalent; organic chemistry recommended. 3 s.h.

ASSOCIATE PROFESSOR NAYLOR

254. PLANT WATER RELATIONS.—A study of factors affecting the availability of water, its absorption and use in plants, and the effects of water deficits on plant processes. Assigned readings, reports, and lectures. Prerequisite: Botany 151 or equivalent. 3 s.h. PROFESSOR KRAMER

255. ADVANCED TAXONOMY.—A study of the historical background of plant taxonomy, modern concepts and systems of classifications, nomenclatorial problems, and the taxonomy of specialized groups. Prerequisite: two years of botany, including Botany 52 or equivalent. 4 s.h. PROFESSOR BLOMQUIST

256. COMMUNITY ANALYSIS AND CLASSIFICATION.—The development of concepts and methods in synecology and their present application to the study of plant communities. Prerequisite: Botany 156 or equivalent. 3 s.h.

PROFESSOR OOSTING

257. PRINCIPLES OF PLANT DISTRIBUTION.—Interpretation of the floristic and ecological plant geography of the world's vegetation. Prerequisite: Botany 156 or equivalent. 3 s.h.

ASSOCIATE PROFESSOR BILLINGS

258. PHYSIOLOGY OF GROWTH AND DEVELOPMENT.—Consideration of the internal factors and processes of new protoplasm and its differentiation at the cellular, tissue, and organ level in plants. Prerequisites: Botany 151 or equivalent; organic chemistry recommended. 3 s.h.

ASSOCIATE PROFESSOR NAYLOR

259. ENVIRONMENTAL MEASUREMENTS.—Methods of obtaining and evaluating climatological data for ecological purposes with special attention to instrumentation and microclimate. Prerequisite: Botany 156 or equivalent. 3 s.h.

ASSOCIATE PROFESSOR BILLINGS

305. VEGETATION OF NORTH AMERICA.—Distribution and limits of the major plant communities, a study in ecological plant geography. Prerequisite: Botany 156 or equivalent. 3 s.h.

PROFESSOR OOSTING

310. STRUCTURE AND CLASSIFICATION OF BRYOPHYTES AND PTERIDOPHYTES.—The morphological and systematic characteristics of mosses, liverworts, ferns, and fern allies. 4 s.h.

PROFESSOR BLOMQUIST

311. STRUCTURE AND CLASSIFICATION OF ALGAE.—The morphological and ecological characteristics of the common freshwater and marine species and the principles underlying their classification. Collecting, identification, and the making of permanent microscopical preparations. 4 s.h.

PROFESSOR BLOMQUIST

341. METHODS IN PLANT PHYSIOLOGY.—The theory and use of apparatus and methods in the physiological research. 3 s.h.

PROFESSOR KRAMER AND ASSOCIATE PROFESSOR NAYLOR

359-360. RESEARCH IN BOTANY.—Individual investigation in the various fields of botany. Credits to be arranged.

PROFESSORS BLOMQUIST, HARRAR, KRAMER, OOSTING, WOLF;
ASSOCIATE PROFESSORS ANDERSON, BILLINGS, NAYLOR, AND PERRY;
ASSISTANT PROFESSOR PHILPOTT

397-398. GENERAL BOTANICAL SEMINAR.—One hour per week throughout the year. Required of all graduates majoring in botany. 2 s.h.

PROFESSORS BLOMQUIST, HARRAR, KRAMER, OOSTING, WOLF; ASSOCIATE
PROFESSORS ANDERSON, BILLINGS, NAYLOR, AND PERRY; AND
ASSISTANT PROFESSOR PHILPOTT

FOREST BOTANY

FOR SENIORS AND GRADUATES

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1 and 2. 4 s.h.

PROFESSOR WOLF

253. DENDROLOGY.—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of botany. 3 s.h.

PROFESSOR HARRAR

RELATED COURSES IN OTHER DEPARTMENTS

This related course may be counted toward a major in botany: Forestry 257.

CHEMISTRY

PROFESSOR HOBBS, CHAIRMAN—022 CHEMISTRY BUILDING; PROFESSOR VOSBURGH, DIRECTOR OF GRADUATE STUDIES—211 CHEMISTRY BUILDING; PROFESSORS BIGELOW, GROSS, HAUSER, HILL, LONDON, AND SAYLOR; ASSOCIATE PROFESSORS BRADSHIER AND BROWN; ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

In the Department of Chemistry graduate work is offered leading to the A.M. and Ph.D. degrees. Before undertaking a graduate program in chemistry, a student should have taken an undergraduate major in chemistry along with related work in mathematics and physics.

Graduate courses in the department are designed to provide a broad basic training in the fields of inorganic, organic, analytical, and physical chemistry. An important requirement for the Ph.D. degree is the successful completion, under the direction of a member of the Staff, of a research program leading to the solution of an original problem. The choice of the research problem, for either the A.M. or the Ph.D. degrees, will determine the field of advanced specialization.

For 1954-55 the courses planned are 206, 215, 233, 234, 251, 252, 253-254, 261-262, 265-66, 271, 273-274, 275-276, 303, 350, 351-352, 360, and 363-364.

FOR SENIORS AND GRADUATES

206. ELEMENTS OF THEORETICAL CHEMISTRY.—A course in the general principles of physical chemistry for students who do not present credit in calculus. Credit is not given for both 206 and 261-262. Three recitations and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics. 6 s.h. With the permission of the Director of Graduate Studies, graduate students from other departments may offer other advanced science courses in place of some of these prerequisites. 4 s.h.

PROFESSORS SAYLOR AND HOBBS

215. ADVANCED INORGANIC CHEMISTRY.—A study of modern theories of valence and molecular structure; also of inorganic compounds, particularly the less common types, illustrated by suitable laboratory preparations. Prerequisites: Chemistry 70, 151-152, and 261-262, or 206. 1, 3, or 4 s.h.

PROFESSORS VOSBURGH AND HILL

216. NUCLEAR CHEMISTRY.—Types and elementary theory of nuclear reactions and the considerations involved in the use of tracers in chemical studies. 1 s.h.

PROFESSOR HILL

233. INSTRUMENTAL ANALYSIS.—Experiments in the use of physical measuring instruments in chemical analysis with special attention to optical instruments. One lecture and three laboratory hours per week. Prerequisites: Chemistry 70 and one year of physics. 2 s.h.

ASSISTANT PROFESSOR STROBEL; PROFESSORS

HOBBS, SAYLOR, AND VOSBURGH

234. PHYSICO-CHEMICAL METHODS OF ANALYSIS.—Discussion of physico-chemical principles as applied to methods of instrumental analysis, illustrated by laboratory experiments, with emphasis on methods involving electrical techniques. One lecture and three laboratory hours per week. Prerequisites: Chemistry 70 and either 261-262 or 206; either of the latter may be taken concurrently. 2 s.h.

ASSISTANT PROFESSOR STROBEL; PROFESSORS

HOBBS, SAYLOR, AND VOSBURGH

251. QUALITATIVE ORGANIC ANALYSIS.—Systematic identification of organic compounds, including a study of solubilities and classification reactions. One lecture and three or six laboratory hours per week. Prerequisites: Chemistry 70 and 151-152. 2 or 3 s.h.

PROFESSOR HAUSER

252. ADVANCED ORGANIC PREPARATIONS.—A laboratory course designed to supplement the student's knowledge of fundamental organic processes by a selected group of laboratory exercises accompanied by oral discussions of techniques and theories pertinent to the experiments. Five hours laboratory and lecture, with lectures in alternate weeks. Prerequisites: Chemistry 70 and 151-152. 2 s.h.

ASSOCIATE PROFESSOR BROWN AND PROFESSOR BIGELOW

261-262. **PHYSICAL CHEMISTRY.**—Fundamentals of general theoretical chemistry illustrated by selected laboratory experiments. Two recitations and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics 51-52 or equivalent. 6 s.h. PROFESSORS HOBBS AND SAYLOR

271. **INTRODUCTION TO RESEARCH.**—Lectures on the use of chemical literature, research methods, recording and publication of results, and other topics. One lecture per week. 1 s.h. ASSOCIATE PROFESSOR BROWN

275-276. **RESEARCH.**—The aim of this course is to give instruction in methods used in the investigation of original problems. Individual work and conferences. 2 to 6 s.h. PROFESSORS BIGELOW, GROSS, HAUSER, HILL, HOBBS, LONDON, SAYLOR, AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

FOR GRADUATES

303. **THERMODYNAMICS.**—Fundamental laws of thermodynamics and their applications to chemistry and physics. 3 s.h. PROFESSORS SAYLOR AND VOSBURGH

304. **PHYSICAL CHEMISTRY OF REACTIONS.**—The theoretical aspects of reaction kinetics, chemical equilibrium, atomic and molecular forces, and the relation of these to chemical reactions are considered. Prerequisite: Chemistry 261-262. 3 s.h. PROFESSORS HILL AND HOBBS

336. **THEORY OF ANALYTICAL CHEMISTRY.**—A study of such topics as precision and errors, theories of precipitation and titration, oxidation and reduction, and others, illustrated by typical analytical methods. One lecture per week. Prerequisites: Chemistry 70 and 261-262. 1 s.h. PROFESSOR VOSBURGH

341-342. **ADVANCED ORGANIC CHEMISTRY.**—Discussion of the theories of organic chemistry with special reference in the first semester to the mechanism of reactions and in the second semester to the synthesis of some of the more complex compounds such as vitamins, hormones, and alkaloids. Undergraduates are admitted to this course only by permission of the Director of Undergraduate Studies. Prerequisites: Chemistry 70 and 151-152. 4 s.h. PROFESSORS BIGELOW AND HAUSER

350. **ORGANIC REACTIONS.**—A study of the scope and limitations of the more important types of reactions of organic chemistry from the point of view of their practical use in the synthesis of organic compounds. Lectures and discussion. Prerequisites: Chemistry 251 and 253. 2 s.h. ASSOCIATE PROFESSOR BRADSHAW

351-352. **ADVANCED SYNTHETIC ORGANIC CHEMISTRY.**—Recent advances in certain selected fields, such as the mechanism of organic reactions, medicinals, dyes, perfumes, terpenes, and alkaloids, will be discussed. The emphasis will be placed on structure studies and synthetic methods. Lecture or seminar one hour each week. 2 s.h. PROFESSORS BIGELOW AND HAUSER

360. **POLYMER CHEMISTRY.**—A survey of the methods of preparation of high-molecular-weight organic compounds and a study of the properties characteristic of macro-molecules in solution and in the solid state. Prerequisite: Chemistry 303. 2 s.h. ASSISTANT PROFESSOR KRIGBAUM

363-364. **SPECIAL TOPICS IN PHYSICAL AND INORGANIC CHEMISTRY.**—Various topics in physical and inorganic chemistry which are of special interest to the staff or students are considered, such as absorption and scattering of light, dielectric phenomena, electrode processes, electrolyte theory, ion exchange, molecular structure, solubility, and valence theory. Prerequisites: Chemistry 261-262, 303 and 304. 4 s.h. PROFESSORS GROSS, HILL, HOBBS, LONDON, SAYLOR AND VOSBURGH, AND ASSISTANT PROFESSOR STROBEL

365-366. **CHEMICAL PHYSICS, STATISTICAL THEORY.**—General introduction to statistical mechanics and applications to chemical problems; solution theory, reaction velocity, changes of state, quantum statistics and the metallic state. Lectures, conferences, and assigned problems. 6 s.h. PROFESSOR LONDON

367-368. CHEMICAL PHYSICS, QUANTUM THEORY OF ATOMIC AND MOLECULAR STRUCTURE.—Theory of atomic and molecular forces and the structure of matter. Lectures, conferences, and assigned problems. 6 s.h.

PROFESSOR LONDON

373-374. SEMINAR.—Required of all graduate students in chemistry. One hour a week discussion. 2 s.h.

PROFESSORS BIGELOW, GROSS, HAUSER, HILL, HOBBS, SAYLOR, AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHER AND BROWN; ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

RELATED COURSES IN OTHER DEPARTMENTS

Biochemistry and Nutrition M24I, M242, M34I, M343-344, M349-350, M351; and Microbiology M322.

ECONOMICS

PROFESSOR HOOVER, CHAIRMAN—320 LIBRARY; PROFESSOR SPENGLER, DIRECTOR OF GRADUATE STUDIES—322 LIBRARY; PROFESSORS BLACK, DE VYVER, HANNA, HUMPHREY, RATCHFORD, SIMMONS, SMITH, AND VON BECKERATH; ASSOCIATE PROFESSOR LONDON; ASSISTANT PROFESSORS CARTER, DEWEY, AND MCKENZIE

Graduate work in the Department of Economics is offered leading to the A.M. and Ph.D. degrees. In order to enter upon graduate work in economics a student should have completed with satisfactory grades at least 12 semester hours of undergraduate work in economics, including 6 hours of Principles of Economics. Among the undergraduate courses of distinct advantage to the graduate student specializing in economics are: General Accounting, Elementary Statistics, and basic courses in philosophy, psychology, the social sciences other than economics, and mathematics.

The fields from among which students working toward a Ph.D. degree in economics may choose for purposes of concentration are: Economic Theory, History of Economic Thought, Trade Cycle and Income and Employment Theory, Demographic and Economic Growth and Change, Economic History, Economic Systems, Industrial and Organizational Economics, International Trade, Labor Economics, Mathematical and Econometrical Economics, Money and Banking, and Public Finance. The requirements for the Ph.D. degree in economics normally include (among other things) completion of the work (or its equivalent) making up the first three of these fields, together with two additional fields; a course or its equivalent in each of most of the remaining fields; adequate knowledge of statistics; and three or four courses in a minor field. When circumstances warrant, these requirements are subject to some modification.

For 1954-55 the following courses are planned for graduate students in economics and related fields: 200, 240, 241, 243, 304, 313, 314, 315, 316, 317, 320, 330, 331, 355, 365 and the Public Control of Business Seminar. For 1955-56 the following courses are planned: 200, 237-238, 241, 244, 305, 311, 312, 313, 314, 319, 320, 329, 358, 365, 396 and the Public Control of Business Seminar.

FOR SENIORS AND GRADUATES*

233. STATE AND LOCAL FINANCE.—A study of expenditures, taxation, and financial administration in state and local governments with emphasis on current problems. Special attention will be given to research methods and materials and to the financial relations between state and local governments. 3 s.h.

PROFESSOR RATCHFORD

237-238. STATISTICAL METHODS.—A study of statistical methods appropriate for dealing with problems in business and the social sciences. In addition to developing more thoroughly the subjects considered in *Business Statistics*, the following methods will be considered: multiple, partial, and curvilinear correlation; curve fitting; probability; sampling distributions; and statistical inference. Prerequisite: Economics 138 or consent of the instructor. Either semester may be taken for credit. 6 s.h.

PROFESSOR HANNA

* Graduate students in economics normally will not receive credit for courses 233, 256, and 262. These courses may be taken for credit by non-economics graduate students, with the consent of the instructor.

240. NATIONAL INCOME.—A critical survey of the conceptual framework and structure of national income and its components, the reliability of national income estimates, and their use in analyzing questions of economic policy. 3 s.h.

PROFESSOR HANNA

256. LABOR LEGISLATION AND SOCIAL INSURANCE.—A study of the relations of the state to labor problems with special reference to remedial legislation, to interference in labor disputes, and to social insurance. 3 s.h. PROFESSOR DE VYVER

262. TRADE UNIONISM AND COLLECTIVE BARGAINING.—An intensive survey of the trade union as an economic institution is followed by a study of the principles and problems of union-management relationship as found in collective bargaining. 3 s.h. PROFESSOR DE VYVER

275-276. ADVANCED INDUSTRIAL ACCOUNTING AND MANAGEMENT.—A comprehensive examination of the rationale and techniques of control methods used in industry. Emphasis is laid on a critical evaluation of the practices followed by job-order, process, and standard costing, as well as the economics of overhead costs. Prerequisites: Economics 171-172 and permission of the Department. 6 s.h.

PROFESSOR BLACK

FOR GRADUATES

200. INTRODUCTORY MATHEMATICAL ECONOMICS.—This course is designed to acquaint the student with the role and the use of mathematical and related methods in economic analysis. 3 s.h. ASSISTANT PROFESSOR MCKENZIE

241. ECONOMIC ANALYSIS.—Review of contemporary theory relating to consumer behavior, production, the firm, price formation, income distribution, and equilibrium. 3 s.h. PROFESSOR SPENGLER

243. MATHEMATICAL ECONOMICS.—A systematic survey of mathematical economic theory. The principal topics are conditions of static equilibrium, including stability conditions, dynamic models using difference equations, and linear production models of input-output analysis and activity analysis. 3 s.h.

ASSISTANT PROFESSOR MCKENZIE

244. INTRODUCTION TO ECONOMETRICS.—The theory of statistical model building in economics. The identifiability of parameters in a system of linear difference equations. The statistical estimation of parameters. The design of dynamic economic models. 3 s.h. ASSISTANT PROFESSOR MCKENZIE

304, 305. SEMINAR IN MONEY AND BANKING.—3 s.h. each.

PROFESSOR SIMMONS

311-312. HISTORY OF POLITICAL ECONOMY.—A detailed review of the development of economic theory, the tools of economic analysis, and economics as a science, together with an analysis of the circumstances affecting this development. Period covered: pre-Christian times through 1936. 6 s.h. PROFESSOR SPENGLER

313-314. SEMINAR IN ECONOMIC THEORY.—The course consists of directed research in economic theory. The primary purpose is the correction of authoritative eclecticism and its replacement by individually integrated theory. Prerequisite: Economics 241 or its equivalent. 6 s.h. PROFESSOR HOOVER

315. SEMINAR IN ECONOMIC SYSTEMS.—3 s.h.

PROFESSOR HOOVER

316. SEMINAR IN ECONOMIC FUNCTIONS OF THE STATE.—3 s.h.

PROFESSOR HOOVER

317. SEMINAR IN DEMOGRAPHIC, POPULATION, AND RESOURCE PROBLEMS.—3 s.h.

PROFESSOR SPENGLER

318. GENERAL SEMINAR IN ECONOMICS.—All graduate students with economics as a major subject are members of this seminar. Reports of progress in research will be made, and there will be lectures and critical discussion by members of the Department. Year course. No credit.

ALL MEMBERS OF THE GRADUATE STAFF

319. SEMINAR IN THE THEORY AND THE PROBLEMS OF ECONOMIC GROWTH AND CHANGE.—3 s.h. PROFESSOR SPENGLER

320. SEMINAR IN TRADE CYCLE, EMPLOYMENT, AND INCOME THEORY.—3 s.h. ASSISTANT PROFESSOR CARTTER

329. FEDERAL FINANCE.—A study of the expenditures, revenues, and financial administration of the government of the United States, with emphasis on current problems. Special attention given to budgetary procedure, corporate and individual income taxes, and the financial relations between federal and state governments. Prerequisite: Economics 187 or consent of instructor. 3 s.h. PROFESSOR RATCHFORD

330. SEMINAR IN PUBLIC FINANCE.—3 s.h. PROFESSOR RATCHFORD

331. SEMINAR IN ECONOMIC HISTORY.—3 s.h. PROFESSOR SMITH

355. SEMINAR IN LABOR ECONOMICS.—3 s.h. PROFESSOR DE VYVER

358. SEMINAR IN LABOR MARKET AND RELATED ANALYSIS.—3 s.h. ASSISTANT PROFESSOR CARTTER

365. SEMINAR IN INTERNATIONAL TRADE.—3 s.h. PROFESSOR HUMPHREY

386. SEMINAR IN LATIN-AMERICAN ECONOMIC PROBLEMS.—3 s.h. PROFESSOR SMITH

389. SEMINAR IN INDUSTRIAL AND GOVERNMENTAL PROBLEMS.—3 s.h.

RELATED COURSES IN OTHER DEPARTMENTS

The following course carries either economics or political science credit for economics majors:

POLITICAL SCIENCE 341. SEMINAR IN PUBLIC ADMINISTRATION.—3 s.h. PROFESSOR CONNERY AND ASSISTANT PROFESSOR DEWEY

The following course, included in the curriculum of the School of Law, carries economics credit for economics majors:

PUBLIC CONTROL OF BUSINESS SEMINAR.—Intensive study of the Federal anti-trust laws and their common-law background, with emphasis on the economic policies involved. 3 s.h. PROFESSOR LIVENGOOD AND ASSISTANT PROFESSOR DEWEY

Courses comprising a candidate's minor may be selected from fields of forestry, history, mathematics, philosophy, political science, psychology, and sociology and anthropology, or from an area that complements the candidate's area of research interests in economics.

EDUCATION

PROFESSOR CARTWRIGHT, CHAIRMAN—1c2 WEST DUKE BUILDING; PROFESSOR BOLMEIER, DIRECTOR OF GRADUATE STUDIES—1c1 WEST DUKE BUILDING; PROFESSORS CARR, CHILDS, AND NAHM; ASSOCIATE PROFESSORS EASLEY, RUDISILL, STUMPF, AND WEITZ; ASSISTANT PROFESSORS MCLENDON, PETTY, AND REYNOLDS

Graduate work in Education is offered leading to the A.M., the M.Ed., the M.A.T., the Ph.D., and the Ed.D. degrees. For each of these degrees there are specific requirements and prerequisites, all of which may be found stated in detail in this *Bulletin*, pp. 34-43.

Departmental requirements and prerequisites for all of these degrees may be obtained from the Director of Graduate Studies. The courses planned for 1954-55 are 201, 203, 204, 205, 206, 208A, 208B, 209, 210, 217, 224, 225, 226, 234, 235, 246, 253, 255, 258, 267, 276, 332-333.

ELEMENTARY EDUCATION

FOR SENIORS AND GRADUATES

201. TEACHING AND SUPERVISION OF ARITHMETIC.—This course gives special attention to the number system, the fundamental operations (with whole numbers, fractions, and decimals), percentage, and measurements. The course will

consider the meaning theory, method of teaching, problem solving, evaluation, practice and drill, and selection and gradation of arithmetical contents. The course is designed for teachers and supervisors in the elementary school. 3 s.h. (E)

ASSISTANT PROFESSOR PETTY

224. TEACHING THE SOCIAL STUDIES IN ELEMENTARY SCHOOLS.—This course will treat objectives, curriculum trends, methods, and materials in elementary-school social studies. Topics to receive emphasis include unit-planning, use of the textbook, the reading program, using community resources, audio-visual materials, dealing with controversial issues, teaching time and place concepts, and evaluation. Opportunity will be provided for teachers to work on their own school problems in the social studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

226. TEACHING READING IN THE ELEMENTARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

232. SUPERVISION OF INSTRUCTION.—A survey of supervision as a means of improving instruction and adapting the curriculum to the learner and to community needs. 3 s.h. (E)

PROFESSOR CARR

235. THE NATURE, FUNCTION, AND REORGANIZATION OF THE CURRICULUM.—One of the required courses for the Master of Education degree without thesis. Selected problems guiding the reading of students. Open to graduate students only. 3 s.h. (E)

PROFESSORS CARR AND CARTWRIGHT

267. THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL.—This course deals with such topics as aims and values, curriculum materials, classroom and laboratory procedures, field trips, lesson planning, and grade placement for science teaching in the elementary school. 3 s.h. (E)

ASSISTANT PROFESSOR REYNOLDS

EXPERIMENTAL EDUCATION AND EDUCATIONAL PSYCHOLOGY

FOR SENIORS AND GRADUATES

208A. MENTAL TESTS AND APPLICATION.—A study of the development of intelligence testing, the concept of general intelligence, various recent applications of mental tests, and training in the giving of individual tests. Prerequisite: course 258 or six semester hours of other work in educational psychology or psychology. First semester. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

208B. PRACTICUM.—Open only to students approved by the instructor. Second semester. 2 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

209. STATISTICAL METHODS APPLIED TO EDUCATION.—A study of statistical methods of treating educational and social data designed to enable teachers or administrators to interpret and use the results of scientific investigations in education. 3 s.h. (E)

ASSOCIATE PROFESSORS EASLEY AND STUMPF

210. INTRODUCTION TO EDUCATIONAL RESEARCH.—The general purpose of this course is to give the student an overview of research, acquaint him with the nature of research processes, and develop within him an appreciation of the essential characteristics of good research work. The course is one of the four basic courses required for the Master of Education degree without thesis and is designed to be liberalizing as well as technical. Open to graduate students only. 3 s.h. (E)

ASSOCIATE PROFESSOR STUMPF

216. PSYCHOLOGICAL PRINCIPLES OF SECONDARY EDUCATION.—A study of adolescence and the psychology of learning as applied to teaching the principal high-school subjects. 3 s.h. (E)

PROFESSOR CHILDS

217. THE PSYCHOLOGICAL PRINCIPLES OF EDUCATION.—An advanced study of teaching, learning, and the learner. This is one of the courses required for the Master of Education degree without thesis. Selected problems guiding the reading of students will be discussed in class. Open to graduate students only. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

227. **THE PSYCHOLOGY OF LEARNING: PROBLEMS.**—The major problems related to the learning process will be examined, with the experimental literature bearing on them. The curves of learning and forgetting, the distribution of practice, economical methods of learning, and the transfer of training will be the major topics considered. 3 s.h. (E) ASSOCIATE PROFESSOR EASLEY

258. **EDUCATIONAL MEASUREMENTS.**—A critical study of the principles and techniques involved in measurement in education, with opportunity for individual research. Prerequisite: twelve semester hours in the Department, including a course in educational psychology. 3 s.h. (E) ASSOCIATE PROFESSOR WEITZ

HISTORY AND PHILOSOPHY OF EDUCATION

FOR SENIORS AND GRADUATES

204. **THE SCHOOL AS AN INSTITUTION.**—Consideration is given to the place of the school in the American social order, and its adaptation to social, economic, and political changes. Special attention is directed to the responsibility (1) of the school for seeking solutions to the perplexing problems of youth created by a changing society; and (2) of the government for providing greater equality of educational opportunities. One of the required courses for the M.Ed. degree without thesis. Open to graduate students only. 3 s.h. (E) PROFESSOR BOLMEIER

PUBLIC SCHOOL ADMINISTRATION

FOR SENIORS AND GRADUATES

203. **PRINCIPLES OF SCHOOL ADMINISTRATION.**—The fundamental facts and procedures of school administration, an analysis of the problems and policies of the organization and direction of a local school system, and the functions of the various school officials. Prerequisites: Education 103 and 88, or six semester hours of equivalent work in education. 3 s.h. (E) PROFESSOR BOLMEIER

213. **PROBLEMS IN THE ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL.**—A study of the work of the elementary-school principal. 3 s.h. (E)

234. **SECONDARY-SCHOOL ORGANIZATION AND ADMINISTRATION.**—This course is designed especially for principals, teachers, and other prospective members of the secondary-school staff. The scope of secondary education is considered to encompass junior high school, regular high school, senior high, and junior college. Special treatment is given to the problems of internal organization and management. 3 s.h. (E) PROFESSOR BOLMEIER

253. **SCHOOL LAW.**—The primary purpose of this course is to familiarize prospective school administrators and teachers with the legal features of school organization and administration. Although some attention is given to constitutional and statutory provisions, the main emphasis is upon court decisions relating to education. Students are expected to select appropriate problems in school law for intensive study. 3 s.h. (E) PROFESSOR BOLMEIER

290. **ADMINISTRATION OF SCHOOL PROPERTY.**—Planning and management of the school plant and its equipment to meet instructional, health, and community needs for immediate and long-range purposes. This course is intended especially for teachers and principals as well as for superintendents. Areas to be treated will include site selection; trends in design, lighting, ventilation, and heating; custodial service and maintenance; and financing. 3 s.h. (E)

ASSOCIATE PROFESSOR STUMPF

FOR GRADUATES

323. **PUBLIC SCHOOL FINANCE.**—A study of educational costs, sources of revenue for the support of public education, collection of revenue, basis of distribution, and accounting for funds spent. 3 s.h. (E) ASSOCIATE PROFESSOR STUMPF

330-331. **PUBLIC SCHOOL ADMINISTRATION, SEMINAR I.**—This seminar is to be taken in the second year of the Ed.D. program. It involves consideration of the following four units of work: (1) organizing the school system; (2) adminis-

tering the educational program; (3) financing the educational program; (4) administering the school personnel. 6 s.h. each semester. (E)

PROFESSORS CARTWRIGHT AND BOLMEIER,
AND ASSOCIATE PROFESSOR STUMPF

332-333. PUBLIC SCHOOL ADMINISTRATION, SEMINAR II.—This seminar is to be taken in the third year of the Ed.D. program. It involves the business administration of the school system; school plant planning, maintenance and operation; public relations and legal aspects of school administration; school records and reports; policy making and the evolution of current procedures. Students will spend some time in field work observing school systems in operation and studying current problems of school administration. 6 s.h. each semester. (E)

PROFESSOR BOLMEIER AND ASSOCIATE PROFESSOR STUMPF

SECONDARY EDUCATION AND EDUCATIONAL SOCIOLOGY

FOR SENIORS AND GRADUATES

205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION.—A consideration of the aims and objectives of secondary-school subjects, emphasizing practical problems of curriculum-making in the high school. 3 s.h. (E)

PROFESSOR CARTWRIGHT

215. EDUCATIONAL AND VOCATIONAL GUIDANCE.—A survey of the literature on guidance with special reference to secondary education; a critical study of the principles and techniques used in guidance; an attempt to locate the problems most urgently in need of solution. 3 s.h. (E)

PROFESSOR CHILDS

225. THE TEACHING OF HISTORY AND THE SOCIAL STUDIES.—Evaluation of the objectives, content, materials, and methods in the teaching of history and the social studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

236. TEACHING READING IN THE SECONDARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. For secondary-school teachers of all subjects who wish to improve the reading and study habits of their students. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

246. THE TEACHING OF MATHEMATICS.—This course deals with such topics as aims, curriculum, course and lesson planning, and classroom procedure for teaching secondary-school mathematics. 3 s.h. (E)

ASSOCIATE PROFESSOR REYNOLDS

255. GUIDANCE FUNCTIONS OF THE CLASSROOM TEACHER.—A consideration of the guidance philosophy, methods, and tools appropriate to the student personnel functions of the classroom teacher. This course is designed for students who do not plan to become guidance specialists, but who wish to apply the principles and techniques of guidance in their teaching and program of pupil development. Prerequisites: 12 s.h. of work, either in education or in a combination of education and psychology, or in psychology. 3 s.h. (E)

ASSOCIATE PROFESSOR WEITZ

276. THE TEACHING OF HIGH-SCHOOL SCIENCE.—Discussion, lectures and collateral reading, related to such topics as aims, tests, curriculum, classroom and laboratory procedure, field trips, course and lesson planning for secondary-school science. 3 s.h. (E)

ASSISTANT PROFESSOR REYNOLDS

NURSING EDUCATION

311. NURSING EDUCATION: PROBLEMS OF PERSONNEL ADMINISTRATION IN NURSING.—A course which deals with problems in the organization and administration of personnel services for students and for graduate nurses. It includes a discussion of methods of selection and orientation, personnel records, provision for general welfare, counseling, placement, and follow-up. Year course. 4 s.h.

PROFESSOR NAHM

312. NURSING EDUCATION: RESEARCH PROBLEMS.—To acquire some knowledge of the principles and methods of research each student works on an individual problem in the field of her major interest. Year course. 4 s.h.

PROFESSOR NAIMI

RELATED COURSES IN OTHER DEPARTMENTS

FOR MAJORS IN EDUCATIONAL PSYCHOLOGY, ELEMENTARY EDUCATION,
AND SECONDARY EDUCATION

Philosophy 208, 242; Psychology 206, 209, 212, 215, 226, 306, 309, 310; Sociology 249, 381, 382.

FOR MAJORS IN PUBLIC SCHOOL ADMINISTRATION

Economics 217, 233, 234, 236; Political Science 209, 230, 231, 241-242, 291, 292; Sociology 233, 235, 237, 243, 246.

FOR MAJORS IN HISTORY AND PHILOSOPHY OF EDUCATION

History 209-210; Philosophy 205, 208, 223; Religion 395, 396; Sociology 286, 381, 382.

ENGLISH

PROFESSOR IRVING, CHAIRMAN—265 WEST DUKE BUILDING; PROFESSOR BAUM, DIRECTOR OF GRADUATE STUDIES—402 LIBRARY; PROFESSORS BOYCE, BRINKLEY, GILBERT, GOHDES, TURNER, AND WARD

The department offers graduate work leading to the A.M. and Ph.D. degrees. Students intending to major in English should have taken enough undergraduate courses in literature to enable them to pursue graduate studies profitably. To satisfy the requirements for the A.M. degree a student must (a) elect 203-204 (3 or 6 semester hours); one of the "period courses" (215, 216; 219, 220; 221, 222; 223, 224; 229, 230; 233, 234; 251, 252); an appropriate seminar; and 9 (or 6) additional semester hours; and (b) write a thesis. A statement of the requirements for the Ph.D. degree may be obtained from the Director of Graduate Studies.

In 1954-55 the courses offered are 201, 202, 203, 204, 215, 216, 218, 219, 220, 227, 229, 230, 231, 233, 234, 245, 251, 252, 349, 350 *a* and *e*.

FOR SENIORS AND GRADUATES

201, 202. ANGLO-SAXON.—In the first semester, an introduction to the language, with the reading of selected prose and of some of the shorter poems; in the second semester, the *Beowulf*. 6 s.h.

PROFESSOR BAUM

203, 204. CHAUCER.—Reading and interpretation of the text; in the first semester, the principal *Canterbury Tales*; in the second, the *Troilus* and the minor poems. A reading report and a term paper. 6 s.h.

PROFESSOR BAUM

205, 206. MIDDLE ENGLISH.—Close study of selected texts, with attention to the development of the language and to the history of the literature from 1200 to 1400. A term paper each semester. 6 s.h.

PROFESSOR BAUM

215, 216. ELIZABETHAN DRAMA.—Careful study of one or two major dramatists (Jonson or Beaumont and Fletcher) and extensive reading in the other writers (Heywood, Ford, Massinger, Marlowe, Middleton) with emphasis on the nature and qualities of their work in relation to its historical background. Exposition of plays, reports, and a term paper each semester. 6 s.h.

PROFESSOR GILBERT

217. MILTON.—Milton's poetry and prose, with emphasis on the major poems. 3 s.h.

PROFESSOR GILBERT

218. SPENSER.—The reading of Spenser's work, with chief attention to *The Faerie Queene*. 3 s.h.

PROFESSOR GILBERT

219, 220. THE EIGHTEENTH CENTURY.—Swift, Pope, Defoe, Addison, Steele, and others are studied in the first semester; in the second, Gray, Johnson, Boswell, Goldsmith, the letter writers, and the early Romantic poets. Lectures, oral reports, and a term paper each semester. 6 s.h.

PROFESSOR IRVING

221, 222. ENGLISH LITERATURE OF THE EARLY NINETEENTH CENTURY.—The British Romantic poets and prose writers from Scott to the early Carlyle, with special attention to Wordsworth, Coleridge, and Keats. While these writers will be approached historically, the main object will be to understand and estimate the aesthetic and ethical values of their writings. Discussion and short papers. 6 s.h.

223, 224. ENGLISH LITERATURE OF THE LATER NINETEENTH CENTURY.—Some of the most important works of the period are discussed in class; the background is filled in by lectures and assigned reading. The first semester is devoted chiefly to Carlyle, Dickens, Thackeray, Tennyson, and Browning; the second semester to Arnold, Ruskin, Pater, George Eliot, Meredith, the Pre-Raphaelites, and Swinburne. A term paper each semester. 6 s.h. PROFESSOR BAUM

227. LITERARY CRITICISM.—A study of the Greek and Roman critics, in chronological order but with emphasis on their permanent value rather than on the mere history; also of the Continental and English critics to about 1700. Lectures, reports, and a term paper. 3 s.h. PROFESSOR GILBERT

229, 230.—AMERICAN LITERATURE, 1800-1870.—The writers emphasized in the first semester are Emerson, Thoreau, and Hawthorne; in the second semester, Poe and Melville. In the first semester some attention is given also to Edwards, Franklin, Bryant, Longfellow, Holmes, Whittier, Lowell, and Parkman; and in the second semester, to Byrd, Jefferson, Paine, Freneau, Brown, Irving, Cooper, Kennedy, Simms, Timrod, and Lincoln. A term paper each semester. 6 s.h. (E) PROFESSOR TURNER

231. EMERSON.—A study of Emerson's ideas as reflected in selected examples of his essays and poems. One test and one term paper. 3 s.h. (E) PROFESSOR GOHDES

232. WHITMAN.—A detailed study of *Leaves of Grass* and of selected prose works. One test and one term paper. 3 s.h. (E) PROFESSOR GOHDES

233. AMERICAN LITERATURE 1870-1900.—Selected works of the chief authors of the period, including Whitman, Lanier, Mark Twain, James, Howells, Crane, and Emily Dickinson. The lectures will deal with the social background as well as the literary trends and the careers of the major authors. A term paper. 3 s.h. (E) PROFESSOR TURNER

234. AMERICAN LITERATURE OF THE TWENTIETH CENTURY.—Selected works of representative authors, including Dreiser, Edith Wharton, Mencken, Lewis, Willa Cather, O'Neill, Robinson, Frost, Eliot, Hemingway, and Faulkner. The lectures will deal primarily with literary trends as shaped by the social background. One test and one term paper. 3 s.h. (E) PROFESSOR GOHDES

239. SHAKESPEARE.—A study of the plays and poems, with attention to sources, earlier criticism, and the work of Shakespeare's contemporaries. 3 s.h. PROFESSOR GILBERT

245. THE EIGHTEENTH-CENTURY NOVEL.—Richardson, Fielding, Smollett, and Sterne are emphasized. Some attention is given to earlier prose fiction and to other contributing literary patterns. Lectures and short papers. 3 s.h. PROFESSOR BOYCE

251, 252. ENGLISH LITERATURE OF THE SEVENTEENTH CENTURY.—A survey of the major works in prose, poetry, and drama from 1600 to the death of Dryden. Lectures, reports and a term paper each semester. 6 s.h. PROFESSOR WARD

269, 270. SOUTHERN LITERATURE.—The principal writers discussed during the first semester are Byrd, Jefferson, Wirt, Kennedy, the Cooke brothers, Legaré, Simms, Timrod, Hayne, Longstreet and other humorists, and the poets of the Civil War. Considerable attention is paid to the historical and cultural background and to Northern and British authors who wrote about the South. An oral report and a term paper each semester. 6 s.h.

274. AMERICAN HUMOR.—The development of the native tradition in the Down-East humorists and the humorists of the Old Southwest. Extensive reading in Mark Twain and his contemporaries, and some attention to the continuation of the tradition after Mark Twain. 3 s.h. (E) PROFESSOR TURNER

FOR GRADUATES

349, 350. SEMINAR COURSES.—An introduction to bibliography and methods of research. One of these courses is required of all candidates for the degree of Master of Arts. 6 s.h.

(a) SIXTEENTH AND SEVENTEENTH CENTURIES.

PROFESSORS GILBERT AND WARD

(b) EIGHTEENTH CENTURY.

PROFESSORS IRVING AND BOYCE

(c) EARLY NINETEENTH CENTURY.

(d) LATER NINETEENTH CENTURY.

PROFESSOR BAUM

(e) AMERICAN LITERATURE.

PROFESSORS GOHDES AND TURNER

FORESTRY

PROFESSOR KORSTIAN, CHAIRMAN AND DIRECTOR OF GRADUATE STUDIES—308 SOCIAL SCIENCE; PROFESSORS HARRAR, KRAMER, SCHUMACHER, AND WOLF; ASSOCIATE PROFESSOR ANDERSON; ASSISTANT PROFESSOR STOLTENBERG

Major and minor work is offered in the scientific aspects of forestry leading to the Master of Arts and Doctor of Philosophy degrees. Work for these degrees may be pursued only in forest-tree physiology, wood anatomy and properties, forest pathology, silvics, forest soils, forest mensuration, forest entomology, and forest economics. College graduates who have had specialized training in botany or soil science and in allied basic subjects, such as physics, chemistry, geology, and zoology, may pursue graduate study and research only in the specialized fields for which their previous work has qualified them. Students who do not have previous training in forestry will be required to complete a minimum of thirty semester hours of approved work in forestry as a preliminary requirement to advanced study for the A.M. and Ph.D. degrees. The holders of these degrees will not be regarded as professionally trained foresters. For information on professional training in forestry, see *Bulletin of the School of Forestry*. For detailed information concerning admission to the Graduate School and for regulations governing candidacy for the A.M. and Ph.D. degrees and for other regulations, consult the proper pages in this *Bulletin*.

FOR SENIORS AND GRADUATES

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1 and 2, or equivalent. 4 s.h. PROFESSOR WOLF

231. FOREST ENTOMOLOGY.—Morphology, general classification, life histories, and control of insects injurious to forest trees, logs, and lumber. 3 s.h.

ASSOCIATE PROFESSOR ANDERSON

251. SAMPLING METHODS IN FORESTRY.—Statistical background for solution of sampling problems with special reference to sample inventory of a forest property. Offered both semesters. Prerequisite: Forestry S151. 3 s.h.

PROFESSOR SCHUMACHER

252. FOREST MENSURATION.—Empirical equation and curve fitting appropriate for construction of timber yield tables, tree volume and taper tables; significance tests and graphical solution of equations. Assignments require operation of calculating machines. Prerequisite: Forestry 251. 3 s.h. PROFESSOR SCHUMACHER

254. DENDROLOGY.—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of botany. 3 s.h. PROFESSOR HARRAR

257. DESIGN OF FORESTRY EXPERIMENTS AND ANALYSIS OF DATA.—Role of experimental design in field and laboratory, and statistical analysis of data as aspects of scientific method in forest research. 5 s.h. PROFESSOR SCHUMACHER

259. **PROPERTIES OF WOOD.**—The chemical nature of wood substance and its industrial chemical derivatives. Wood-moisture relationships; pertinent non-mechanical physical properties; mechanical properties and factors affecting the strength of wood; standard timber testing procedures. Uses of woods as determined by their properties. Prerequisites: one year of college chemistry; one course in college physics. 3 s.h.

PROFESSOR HARRAR

260. **WOOD ANATOMY.**—Study of the physical features and the gross and minute structural characteristics of wood leading to the identification of the commercial woods of the United States, and the important tropical woods used in American wood-working industries. Elementary microtechnique. Prerequisite: one year of botany. 3 s.h.

PROFESSOR HARRAR

261. **FOREST SOILS.**—Origin, development, and classification of soils with special emphasis on those developed in humid climates; morphological, physical, and chemical properties of soils in relation to growth of trees; effect of forests on soils. Prerequisites: Chemistry 1 and 2, and Physics 1, or equivalents; physical geology, mineralogy, petrology, and analytical chemistry are also desirable. 3 s.h.

264. **SILVICS.**—Ecological foundations of silviculture with special reference to forest site factors; influence of forests on their environment; growth and development of trees and stands; origin, development, and classification of forest communities; methods of studying forest environments. Desirable prerequisites: plant physiology, plant ecology, and Forestry 261, or equivalent. 3 s.h.

PROFESSOR KORSTIAN

276. **FORESTRY POLICY.**—Objective study and analysis of the development of public land and forestry policies in the United States, present policies of public and private forestry organizations, and current policy issues in the light of economic and other criteria. 2 s.h.

ASSISTANT PROFESSOR STOLTENBERG

277. **ECONOMICS OF FORESTRY.**—Principles of economics used in the analysis of factors affecting the supply of forest products, pricing of stumpage and primary forest products, factors affecting the demand for forest products, economic characteristics and problems of the major forest products industries; analysis of such specific private forestry problems as marketing, forest ownership pattern, taxation, credit, risk, and economic fluctuations. Prerequisite: at least one course in the principles of economics. 3 s.h.

ASSISTANT PROFESSOR STOLTENBERG

FOR GRADUATES

323-324. **ADVANCED FOREST PATHOLOGY.**—Advanced study and research on life histories and control of diseases of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and forest pathology. Credits to be arranged.

PROFESSOR WOLF

326. **ADVANCED FOREST SOILS.**—Interrelations of the physical, chemical, and biological characteristics of forest and range soils. Prerequisites: analytical chemistry and Forestry 261. 3 s.h.

351-352. **ADVANCED PHYSIOLOGY OF FOREST TREES.**—Advanced study and research on problems in physiology of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and plant ecology or silvics. Credits to be arranged.

PROFESSOR KRAMER

356. **SEMINAR IN FOREST ECONOMICS.**—Examination and discussion of the application of economic concepts in forestry, the potential contribution of economic analysis to private and public forest management; current research in forest economics. Prerequisite: Forestry 277 or equivalent; courses in economic theory are desirable. 2 s.h.

ASSISTANT PROFESSOR STOLTENBERG

357-358. **RESEARCH IN FORESTRY.**—Credits to be arranged. Students who have had adequate training may do research under direction of members of the Faculty in the following branches of forestry:

a. **SILVICS.**—Prerequisites: Forestry 254, 261, and 264, or equivalents.

PROFESSOR KORSTIAN

b. **FOREST SOILS.**—Prerequisite: Forestry 261 or equivalent.

e. FOREST ECONOMICS.—Prerequisite: Forestry 277 or equivalent.

ASSISTANT PROFESSOR STOLTENBERG

f. PROPERTIES OF WOOD.—Prerequisites: Forestry 259 and 260, or equivalents.

PROFESSOR HARRAR

g. FOREST MENSURATION.—Prerequisites: Forestry S151, 251, and 252, or equivalents.

PROFESSOR SCHUMACHER

h. FOREST ENTOMOLOGY.—Prerequisite: Forestry 231 or equivalent.

ASSOCIATE PROFESSOR ANDERSON

GERMANIC LANGUAGES AND LITERATURE

PROFESSOR VOLLMER, CHAIRMAN AND DIRECTOR OF GRADUATE STUDIES—106A SOCIAL SCIENCE; ASSOCIATE PROFESSOR SHEARS

The Department of German offers graduate work leading to the A.M. degree. Students who expect to major in German should have had sufficient undergraduate courses in Germanic languages to enable them to proceed to more advanced work.

Students who wish to take courses in German for a minor should normally have completed a third-year course (in exceptional cases, a second-year course) of College German with acceptable grades.

For 1954-55 the courses planned are 203-204, 207-208.

203-204. EIGHTEENTH CENTURY.—Eighteenth-century German literature in its relation to contemporary European philosophy. 6 s.h.

PROFESSOR VOLLMER

207-208. GERMAN ROMANTICISM.—The course covers the entire field of German Romanticism from 1800 to 1850. 6 s.h.

PROFESSOR VOLLMER

209-210. KLEIST, GRILLPARZER, AND HEBBEL.—A study of the leading representatives of German drama in the first half of the nineteenth century. 6 s.h.

211-212. HEINRICH HEINE.—A study of the German poet and his immediate successors in the movement known as *Jungdeutschland*. 6 s.h.

PROFESSOR VOLLMER

213-214. LITERATURE OF THE EMPIRE, 1871-1914.—A study of the literature of this period with special emphasis on a few leading writers such as Fontane, Hauptmann, Mann, and Hesse. 6 s.h.

ASSOCIATE PROFESSOR SHEARS

RELATED COURSES IN OTHER DEPARTMENTS

The following courses in other departments are recommended to students, who are majoring in Germanics, as particularly valuable in building a proper background for Germanic studies:

(a) Graduate courses in literature or philology, offered by the ancient and modern language departments, to be selected after consultation with the Germanic Department.

(b) Graduate courses in history and philosophy, offered by those departments, to be selected after consultation with the Germanic Department.

HISTORY

PROFESSOR SYDNOR, CHAIRMAN—101 LIBRARY; PROFESSOR CARROLL, DIRECTOR OF GRADUATE STUDIES—406 LIBRARY; PROFESSORS CLYDE, CURTISS, HAMILTON, LANNING, MANCHESTER, AND WOODY; ASSOCIATE PROFESSORS FERGUSON, NELSON, PARKER, ROPP, AND WATSON; ASSISTANT PROFESSOR STEVENS

A student who intends to work for an A.M. degree in history must present a total of eighteen semester hours of credit for undergraduate courses in history, of which six hours must be in American History if he plans to take his major in that field.

A candidate for the degree of Doctor of Philosophy in history is required to prepare himself in four fields of history, one of which must be the history of the United States and another the history of Western Europe. The Department offers graduate instruction in the following fields: Western Europe; the United States; Great Britain; Latin America; American Foreign Relations; the Far East in the modern period; Russia; Military history.

For 1954-55 the courses planned are as follows: 205-206, 209-210, 230, 231-232, 263-264, 307, 315, 321, 337, 217-218, 225-226, 227-228, 241-242, 245-246, 267-268, 269-270, 305, 317, 343, 312, 320.

AMERICAN HISTORY

FOR SENIORS AND GRADUATES

203-204. **THE UNITED STATES, 1850-1900.**—The rise of sectionalism, secession, wartime problems of the Union and Confederacy, political and economic adjustments of Reconstruction, the status of the Negro, the New South, problems of capital and labor, the agrarian revolt, political parties and reforms, the Spanish-American War. 6 s.h. PROFESSOR WOODY

205-206. **THE UNITED STATES IN THE TWENTIETH CENTURY.**—The emergence of the United States as a major power; attention is focused on domestic developments and conflicting theories of expansion and federal power. Emphasis in the first semester is on the progressive era and the first World War; the second semester is devoted to the twenties and to the Franklin Roosevelt administration. 6 s.h. ASSOCIATE PROFESSOR WATSON

209-210. **CONSTITUTIONAL HISTORY OF THE UNITED STATES, 1760 TO THE PRESENT.**—A study of the basic problems in forming the Constitution; of its development through the major crises in the history of the United States; of the effects of changing social, cultural, economic, and political conditions on the Constitution. 6 s.h. ASSISTANT PROFESSOR STEVENS

215-216. **FOREIGN POLICY AND DIPLOMACY OF THE UNITED STATES.**—The work in the first semester, covering the period 1775-1877, deals with such topics as the origins and evolution of basic foreign policies; isolation from Europe; paramount interests in Latin America, including the Monroe Doctrine; international co-operation in the Far East. The work in the second semester, covering the period since 1877, deals with such topics as the rise of the new Manifest Destiny; beginnings of American imperialism in Latin America and the Far East; the failure of traditional neutrality in the first World War; postwar conflicts between isolation and collective security; involvement in the second World War. 6 s.h. PROFESSOR CLYDE

230. **THE PORTUGUESE EMPIRE AND THE RISE OF BRAZIL.**—The course will deal with Portuguese explorations, the establishment of the Portuguese Empire in the East, the transplanting of Portuguese culture overseas and the rise of a native Brazilian civilization. 3 s.h. PROFESSOR MANCHESTER

231-232. **The HISPANIC COLONIES AND REPUBLICS IN AMERICA.**—The development of the Iberian states as colonizing powers, the Conquest of America, the Spanish treatment of the Indian, the contest between Spain and other European nations over America, the independence movement, the struggle for stable government, the rise of liberalism with special emphasis upon Mexico from the Revolution of 1910 to the present, and basic inter-American developments. 6 s.h. PROFESSOR LANNING

233-234. **THE INSTITUTIONAL, CULTURAL, AND SOCIAL HISTORY OF HISPANIC AMERICA.**—The first semester of this course deals with subject races, the development of mixed breeds, the governmental system, the Church and the Inquisition, and Spanish culture with emphasis upon university subjects. In the second semester the work deals with the political ideas of the wars of independence, revolution and dictatorship, the rise of public education, public health, land reform, and the proletarian movement. 6 s.h. PROFESSOR LANNING

263-264. **AMERICAN COLONIAL HISTORY AND THE REVOLUTION, 1606-1783.**—The growth of institutions and economic life in the English colonies; the American Revolution. 6 s.h. PROFESSOR WOODY

FOR GRADUATES

307. **SEMINAR IN AMERICAN POLITICAL HISTORY.**—Year course. 2 s.h. PROFESSOR SYDNOR

315. SEMINAR IN SOUTHERN HISTORY.—Year course. 2 s.h.

PROFESSOR WOODY

321. SEMINAR IN THE HISTORY OF SPAIN, HISPANIC AMERICA, AND INTER-AMERICAN RELATIONS.—Year course. 2 s.h.

PROFESSOR LANNING

336. POLITICAL HISTORY OF THE UNITED STATES, 1783-1860.—Among the topics treated are public issues, political ideas, forms of party organization, and techniques for attaining personal and party success in politics. Year course. 4 s.h.

PROFESSOR SYDNOR

337. SOCIAL AND ECONOMIC LIFE OF THE OLD SOUTH.—Conditions and trends in the South in respect to population movements, transportation, agriculture, slavery, urban life, commerce, manufacturing, religion, education, and other intellectual activities. Year course. 4 s.h.

PROFESSOR SYDNOR

EUROPE AND THE FAR EAST

FOR SENIORS AND GRADUATES

217-218. EUROPE SINCE 1870.—International relations since the Franco-German War is the chief subject of the study in this course; special emphasis is placed upon the underlying economic and political influence. 6 s.h.

PROFESSOR CARROLL

221-222. THE AGE OF THE RENAISSANCE.—The decline of characteristic features of medieval civilization and the rise of modern European institutions with particular attention to intellectual movements from Dante to Erasmus. 6 s.h.

ASSOCIATE PROFESSOR NELSON

225-226. THE AGE OF THE REFORMATION.—A survey of European civilization from 1500 through the Peace of Westphalia. 6 s.h.

ASSOCIATE PROFESSOR NELSON

227-228. EUROPE IN THE NINETEENTH CENTURY.—A study, beginning with the career of Napoleon Bonaparte, of the forces and personalities influential in the nineteenth century. Emphasis in the first semester is on the problems of the biographer; in the second, on those of a student of national communities. 6 s.h.

ASSOCIATE PROFESSOR PARKER

241-242. THE FAR EAST.—The history of the Western impact on Eastern Asia in the 19th and 20th centuries. Emphasis is placed on such matters as commercial and colonial expansion, the opening of China and Japan, the development by the Western Powers and Japan of colonial, imperialistic, and nationalistic interests, and the rise of Communist power in Asia. 6 s.h.

PROFESSOR CLYDE

243-244. THE UNITED STATES AND THE FAR EAST.—An historical analysis of American relations with the peoples of Eastern Asia during the 19th and 20th centuries. 6 s.h.

PROFESSOR CLYDE

245-246. WAR IN THE MODERN WORLD.—This course is concerned with the relations between warfare and modern political, economic and social conditions. Special attention is given to the development of British and American military methods and to the events of the American Civil War and the two World Wars. The work in the first semester deals with Clausewitz's theories of warfare and the period from the introduction of gunpowder to 1871; in the second semester there is more detailed analysis of recent land, sea, and air warfare. 6 s.h.

ASSOCIATE PROFESSOR ROPP

261-262. RUSSIA IN THE TWENTIETH CENTURY.—A study of the background of the Revolution of 1917 followed by an analysis of the history and policies of the Soviet state. 6 s.h.

PROFESSOR CURTIS

267-268. THE TRANSITION FROM MEDIEVAL TO MODERN ENGLAND.—A study of the changes in English society and ideas from the time of Edward III to that of Elizabeth. 6 s.h.

ASSOCIATE PROFESSOR FERGUSON

269-270. ENGLISH HISTORY FROM THE TUDOR PERIOD TOWARD THE PRESENT.—Emphasis is on political and governmental leaders, events, and institutions of selected periods and on the underlying forces that shaped them. 6 s.h.

PROFESSOR HAMILTON

FOR GRADUATES

305. SEMINAR IN THE HISTORY OF ENGLAND AND THE BRITISH EMPIRE.—The work consists of practical training in the methods of historical research based on sources for modern British history. Year course. 2 s.h.

PROFESSOR HAMILTON

317. SEMINAR IN RECENT EUROPEAN HISTORY.—Year course. 2 s.h.

PROFESSOR CARROLL

343. SEMINAR IN THE HISTORY OF AMERICAN FOREIGN RELATIONS AND THE FAR EAST.—Particular attention is given to critical examination of the bibliography of the field. Year course. 2 s.h.

PROFESSOR CLYDE

HISTORIOGRAPHY AND THE TEACHING OF HISTORY

FOR GRADUATES

312. SEMINAR IN THE TEACHING OF HISTORY IN COLLEGE.—The work in this course is intended to acquaint students with the problems involved in teaching history in college. It includes critical observation of the teaching by members of the History Staff in Duke University. Year course. 2 s.h.

PROFESSOR MANCHESTER AND PROFESSOR HAMILTON

This course is required of all candidates for the degree of Doctor of Philosophy who are in residence as many as two years at Duke University unless excused therefrom by the Department.

320. HISTORIOGRAPHY.—A critical study of the process of finding, appraising, and interpreting the sources of history and of the presentation of the results in narrative. Works of important historians from Herodotus to the present are analyzed. The student undertakes specific exercises in research, criticism, and narration. There is consideration of such general topics as schools, theories, philosophies, and the function of history. Year course. 4 s.h.

ASSOCIATE PROFESSOR NELSON

This course is required of all candidates for the degree of Doctor of Philosophy who are in residence as many as two years at Duke University unless excused therefrom by the Department.

RELATED COURSES IN OTHER DEPARTMENTS

Economics 215, 216, 231, 311-312; Political Science 223, 224, 225, 226, 227, 228, 229, 231. Religion 309, 395, 396; Sociology 382.

MATHEMATICS

PROFESSOR GERGEN, CHAIRMAN—134 PHYSICS BUILDING; PROFESSOR ROBERTS, DIRECTOR OF GRADUATE STUDIES—230 PHYSICS BUILDING; PROFESSORS CARLITZ, DRESSEL, ELLIOTT, AND THOMAS

Graduate work in the Department of Mathematics is offered leading to the A.M. and Ph.D. degrees. The student, in his undergraduate work, must have had courses in differential and integral calculus, and at least 6 semester hours of other courses in mathematics on the junior or senior level.

The A.M. degree with a major in mathematics is awarded primarily on the basis of scholarship. Of the 24 semester hours of course work required for this degree, 18 semester hours must be taken in the Department of Mathematics.

The Ph.D. degree in mathematics is awarded upon the demonstration of ability and training in research. The original dissertation, therefore, becomes the most important of the formal requirements for this degree.

Because of the important literature of mathematics written in German and French, the student must have a practical reading knowledge of these languages near the beginning of his graduate study.

For 1954-55 the courses planned are 235-236, 247-248, 271-272, 285-286, 291-292, 337-338.

FOR SENIORS AND GRADUATES

227-228. **THEORY OF NUMBERS.**—Congruences, arithmetic functions, compound moduli, quadratic reciprocity, Gauss sums, quadratic forms, sums of squares. Prerequisite: calculus. 6 s.h. PROFESSOR CARLITZ

229-230. **ALGEBRAIC NUMBERS.**—Ideals, unique factorization, divisors of the discriminant, determination of the class number. Prerequisite: theory of equations. 6 s.h. PROFESSOR CARLITZ

235-236. **ABSTRACT ALGEBRA.**—Groups, fields, rings, matrices, quadratic and bilinear forms, general Galois theory, hypercomplex systems. Prerequisite: calculus. 6 s.h. PROFESSOR CARLITZ

247-248. **ARITHMETIC OF POLYNOMIALS.**—Field theory, detailed study of finite fields, special polynomials and functions, valuation theory, the zeta function. Prerequisite: Mathematics 235 or consent of the instructor. 6 s.h. PROFESSOR CARLITZ

253-254. **DIFFERENTIAL GEOMETRY.**—Curves and surfaces in three-dimensional Euclidean space, applicability, differential parameters, Riemannian geometry of n -space. Prerequisite: calculus. 6 s.h. PROFESSOR THOMAS

255-256. **PROJECTIVE GEOMETRY.**—Postulational, synthetic treatment centering around Desargues' theorem and the principle of projectivity. Conics, coordinates, order, continuity, metric properties. Prerequisite: calculus. 6 s.h. PROFESSOR THOMAS

271-272. **INTRODUCTORY TOPOLOGY.**—Topological properties of Euclidean spaces, set-theoretic and combinatorial methods. Prerequisite: calculus. 6 s.h. PROFESSOR ROBERTS

285. **MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.**—Vectors, line and surface integrals, tensors, complex variables, differential and integral equations. Prerequisite: Mathematics 53. 3 s.h. PROFESSOR DRESSER

286. **MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.**—Wave equation, Fourier series, heat equations, telegraphic equation, Legendre polynomials, Bessel functions, Schrödinger's equation. Prerequisite: Mathematics 53. 3 s.h. PROFESSOR DRESSER

291-292. **THEORY OF FUNCTIONS.**—Limits, implicit functions, power series, double series, Cauchy's theorem and its applications, residues, Riemann surfaces, conformal mapping. Prerequisite: calculus. 6 s.h. PROFESSOR GERGEN

FOR GRADUATES

325-326. **REAL VARIABLE.**—Number system, Lebesgue and Stieltjes integrals, topics in Fourier series. Prerequisite: Mathematics 291-292. 6 s.h. PROFESSOR GERGEN

337-338. **EXISTENCE THEOREMS.**—Systems of partial differential equations, Pfaffian systems, theorems of Cauchy, Riquier, and Cartan, singular integral varieties. Prerequisite: Mathematics 291-292. 6 s.h. PROFESSOR THOMAS

343-344. **ORDINARY DIFFERENTIAL EQUATIONS.**—Solution by separation of variables, exact differentials, integrating factors, solution in series. Cauchy's existence theorem, linear differential systems, singular points, partial differential equations equivalent to ordinary systems. Prerequisite: Mathematics 291-292. 6 s.h. PROFESSOR THOMAS

371-372. **DIMENSION THEORY.**—Abstract spaces, separation theory for Euclidean spaces, dimension theory. Prerequisite: Mathematics 271-272. 6 s.h. PROFESSOR ROBERTS

PHILOSOPHY

PROFESSOR NEGLEY, CHAIRMAN—3-1 WEST DUKE BUILDING; PROFESSOR BAYLIS, DIRECTOR OF GRADUATE STUDIES—3-1-3 WEST DUKE BUILDING; PROFESSOR PATTERSON; ASSISTANT PROFESSORS PEACH AND WELSH; VISITING ASSISTANT PROFESSOR BUCK; INSTRUCTOR, DR. CLARK

Candidates for the Ph.D. degree in Philosophy will be expected to acquire teaching proficiency in the general fields of philosophical investigation, and to demonstrate scholarly ability in at least one of those fields. The achievement of specialized competence will necessitate adequate acquaintance with pertinent fields of research. The student will be encouraged to take as much work in minor departments as time permits. Minor study need not be confined to a single department; individual programs will be arranged to suit the students' needs and interests.

The preliminary examinations in Philosophy are evaluated in terms of the ability of the student to continue graduate study; they are not to be interpreted as a comprehensive survey of course study at the graduate level. The student in philosophy will be expected to fulfill the language requirements and pass the departmental preliminary examinations before the end of the third semester of residence. Students who enter with an A.M. degree will be expected to pass the preliminary examinations before the end of the first year of residence. Information about general requirements, or about preliminary examinations, may be obtained by addressing a request to the Department.

For 1954-55 the courses planned are: 201, 203, 208, 209, 212, 217, 223, 224, 232, 236, 241, 251-252, 307, 331-332, 350-351.

FOR SENIORS AND GRADUATES

201. PHILOSOPHY OF ART.—A study of some fundamental issues in aesthetics, with particular reference to the fields of literature, music, and painting. Problems discussed include: the nature and purposes of the arts; meaning in the arts; art and morality; the role of standards in art criticism; aesthetic judgment; interpretation and evaluation. 3 s.h. (E) ASSISTANT PROFESSOR WELSH

203. CONTEMPORARY ETHICAL THEORIES.—Reading and discussion of twentieth-century American and British moralists. 3 s.h. (E) PROFESSOR BAYLIS

205. THE PHILOSOPHY OF HISTORY.—An inquiry into the logic and methodology of the knowledge of history, and into the metaphysical implications of history. 3 s.h. (E) PROFESSOR NEGLEY

208. POLITICAL PHILOSOPHY.—Analysis of the structure of social organization, with particular reference to the function of law in democratic politics. 3 s.h. (E) PROFESSOR NEGLEY

209. THE PHILOSOPHY OF RELIGION.—A critical and constructive study of the nature of religion, of its various forms and manifestations, and of its functions in human life. 3 s.h. (E) PROFESSOR PATTERSON

211. PLATO.—Undergraduate prerequisite: Philosophy 93. 3 s.h. (E) PROFESSOR PATTERSON

212. HISTORY OF MODERN PHILOSOPHY.—3 s.h. (E) ASSISTANT PROFESSOR PEACH

213 HISTORY OF AESTHETICS.—Theories of art and beauty from Pythagoras to Croce. 3 s.h. (E)

217. ARISTOTLE.—Undergraduate prerequisite: Philosophy 93. 3 s.h. (E) PROFESSOR PATTERSON

218. MEDIEVAL PHILOSOPHY.—A study of the philosophy of the Middle Ages with special attention to selected texts from the works of Christian, Jewish, and Arabian philosophers. 3 s.h. (E) PROFESSOR PATTERSON

223. CONTEMPORARY PHILOSOPHY: IDEALISM.—Examination and analysis of the idealist position in recent and contemporary philosophy, with special attention to the works of Bradley and Jordan. 3 s.h. (E) PROFESSOR NEGLEY

224. CONTEMPORARY PHILOSOPHY: REALISM.—A critical analysis, comparison, and evaluation of the several varieties of recent realistic theories, presentative and representative. 3 s.h. (E) PROFESSOR BAYLIS

225. BRITISH EMPIRICISM: LOCKE, BERKELEY, HUME.—3 s.h. (E)

231. PHILOSOPHY OF SCIENCE.—A historical and critical survey of the basic philosophical ideas underlying the development of modern science. 3 s.h. (E)

232. SPECIAL PROBLEMS IN PHILOSOPHY OF SCIENCE.—Investigation by students of advanced problems in philosophy of science with special attention to a field determined by student's interest. 3 s.h. (E) DR. CLARK

236. ORIENTAL PHILOSOPHY.—A study of the genesis of philosophical ideas in the Upanishads and the Bhagavadgita, and of the development of the orthodox systems and of the philosophies of the Jains and the Buddhists. 3 s.h. (E)

PROFESSOR PATTERSON

241. LOGIC.—Fundamental principles of valid deductive reasoning. 3 s.h. (E) DR. CLARK

250. PHILOSOPHICAL ANALYSIS.—A critical study of recent and contemporary essays in philosophical analysis, and an evaluation of the nature, methods, and results of this movement. 3 s.h. (E) PROFESSOR BAYLIS

251. SEMINAR: EPISTEMOLOGY.—3 s.h. (E) PROFESSOR BAYLIS

252. SEMINAR: METAPHYSICS.—3 s.h. (E) PROFESSOR BAYLIS

253. CONTEMPORARY BRITISH PHILOSOPHY.—A consideration of philosophical doctrines and methods which are characteristic of British philosophy today, with special emphasis on contrasts with American and continental views and approaches. 3 s.h. (E) VISITING ASSISTANT PROFESSOR BUCK

FOR GRADUATES

307. SEMINAR: KANT.—3 s.h. (E) PROFESSOR NEGLEY

331, 332. SPECIAL FIELDS OF PHILOSOPHY.—Directed reading and research in specialized fields not intensively covered by the course curriculum; intended primarily for Ph.D. candidates. 3 s.h. (E) ALL MEMBERS OF THE GRADUATE STAFF

350, 351. SEMINAR IN THE TEACHING OF PHILOSOPHY.—Required of all candidates for the Ph.D. degree in Philosophy. Discussion of the problems of teaching philosophy at the undergraduate level. Practice teaching in undergraduate discussion sections. 1 s.h. (E) ALL MEMBERS OF THE GRADUATE STAFF

PHYSICS

PROFESSOR NIELSEN, CHAIRMAN—119 PHYSICS BUILDING; ASSOCIATE PROFESSOR GREULING, ACTING DIRECTOR OF GRADUATE STUDIES—213 PHYSICS BUILDING; PROFESSOR HATLEY, GORDY, NEWSON, NORDHEIM, SPONER, AND LONDON; ASSOCIATE PROFESSOR FAIRBANK; ASSISTANT PROFESSORS LEWIS AND BLOCK

The Department of Physics offers graduate work leading to the A.M. and Ph.D. degrees. Course work is designed to give a broad basic foundation in classical and modern physics. All graduate students will be expected to acquire a thorough knowledge of the various branches of classical physics and some familiarity with modern physics and with basic laboratory skills. They will be required to take such course work in the 200 number courses as may be necessary to obtain this foundation.

The student will be required to take such course work as will best be adapted to the kind of work he will subsequently specialize in and to the kind of research he will undertake. The choice of minor will be similarly determined.

Since a practical reading knowledge of French and German is highly desirable for the student of physics, he should satisfy these language requirements as early as possible.

For 1954-55 the courses planned are: 201-202, 203, 213-214, 217-218, 220, 306, 315-316, 320, 324, 331, 341, 343, 351-352, 353-354, 365-366.

FOR SENIORS AND GRADUATES

201-202. MECHANICS.—The fundamental principles of Newtonian mechanics; general dynamics of systems of particles, and rigid bodies; the methods of Lagrange and Hamilton; generalized mechanics. Prerequisite: Physics 125. 6 s.h.

ASSISTANT PROFESSOR BLOCK

203. ELECTRICITY AND MAGNETISM.—Fundamentals of electricity and magnetism. Electrostatics and magnetostatics. Direct current circuits, and networks—bridges, potentiometers, galvanometers, alternating current circuits and networks. Electromagnetic waves. 3 s.h.

ASSISTANT PROFESSOR LEWIS

213-214. CONTEMPORARY PHYSICS.—A course which covers the fundamental concepts and the experimental basis of modern physics. Three lectures each week. 6 s.h.

ASSISTANT PROFESSOR LEWIS

217-218. ADVANCED PHYSICS LABORATORY.—Measurements involving the fields of mechanics, electricity, magnetism, heat, sound, optics and modern physics. 2-6 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

219. INTRODUCTION TO ELECTRONICS.—Fundamentals of electron tubes. Motion of charged particles, space charge, gaseous conduction. Electron tube circuits. Three hours of lecture and one three-hour laboratory per week. 4 s.h.

PROFESSOR GORDY

220. ELECTRON CIRCUIT ANALYSIS.—Linear and non-linear circuit analysis, electric oscillations, operation of filters, Fourier analysis of wave phenomena, coupling in electrical circuits. 3 s.h.

PROFESSOR GORDY

FOR GRADUATES

303-304. THERMODYNAMICS AND STATISTICAL MECHANICS.—Fundamental laws of thermodynamics and statistical mechanics with applications to physics and chemistry. Gas laws; transport phenomena; elements of quantum statistics. 6 s.h.

ASSOCIATE PROFESSORS FAIRBANK AND GREULING

306. LOW TEMPERATURE PHYSICS.—A study of the properties of matter near the absolute zero of temperature; superconductivity, liquid helium, adiabatic demagnetization. Prerequisite: Physics 303. 3 s.h.

ASSOCIATE PROFESSOR FAIRBANK

315-316. PRINCIPLES OF QUANTUM THEORY.—Original and fundamental concepts of quantum theory; wave and matrix mechanics; theory of measurements; exclusion principle and electronic spin. Prerequisite: Physics 201-202. 6 s.h.

PROFESSOR NORDHEIM

318-319. ELECTROMAGNETIC FIELD THEORY.—Electrostatics and potential theory; dielectric and magnetic media; the magnetic field of currents and the law of induction. Maxwell's electrodynamics; theory of wave optics; refraction; interference, and diffraction. Crystal optics. Prerequisites: Physics 126, 175. 6 s.h.

ASSOCIATE PROFESSOR GREULING

320. THEORY OF ELECTRONS.—Lorentz' equations of electrodynamics. Classical theories of dispersion, magnetism, and conductivity. Theory of relativity. Prerequisite: Physics 318-319. 3 s.h.

ASSOCIATE PROFESSOR GREULING

323. THEORY OF ATOMIC SPECTRA.—Excitation of spectra, computation of wave lengths from photographs of spectra, study of the structure of atomic spectra with applications. 3 s.h.

PROFESSOR SPONER

324. THEORY OF MOLECULAR SPECTRA.—A study of the structure of molecular spectra with applications. 3 s.h.

PROFESSOR SPONER

331. MICROWAVE RADIATION.—Microwave generators, cavity resonators, transmission lines, radiation propagation and detection. 4 s.h.

PROFESSOR GORDY

335. MICROWAVE SPECTROSCOPY.—Application of microwaves in the determination of molecular, atomic and nuclear properties. Stark and Zeeman effects in microwave spectroscopy. Magnetic resonance absorption. 3 s.h.

PROFESSOR GORDY

340. STRUCTURE OF MATTER.—Selected topics dealing with the constitution of matter, such as crystal structure and x-rays, the solid state and problems of molecular structure. 3 s.h.
PROFESSOR SPONER

341. ADVANCED TOPICS IN QUANTUM THEORY.—Quantum theory of radiation and collisions with special reference to nuclear and high energy physics. Prerequisite: Physics 315-316. 3 s.h.
PROFESSOR NORDHEIM

343. NUCLEAR PHYSICS.—Elementary theory of the deuteron; low energy neutron proton scattering; theory of nuclear reactions; penetration of potential barriers; nuclear energy levels. Prerequisite: Physics 315. 3 s.h.
PROFESSOR NEWSON

344. ADVANCED NUCLEAR PHYSICS.—The deuteron, nuclear forces, scattering of elementary particles, beta-radiation. Other aspects of nuclear physics susceptible of theoretical interpretation. Prerequisite: Physics 343. 3 s.h.
PROFESSOR NORDHEIM

351-352. SEMINAR.—A series of weekly discussions on topics related to the research projects under investigation in the Department. 2 s.h.
ALL MEMBERS OF THE GRADUATE STAFF

353-354. THESIS SEMINAR.—Students who are properly qualified may carry on research work under the direction of members of the staff. 6 s.h.
ALL MEMBERS OF THE GRADUATE STAFF

365-366. CHEMICAL PHYSICS. STATISTICAL THEORY.—General introduction to statistical mechanics and applications to chemical problems; solution theory, reaction velocity, changes of state, quantum statistics and the metallic state. Lectures, conferences, and assigned problems. 6 s.h.
PROFESSOR LONDON

367-368. CHEMICAL PHYSICS. QUANTUM THEORY OF ATOMIC AND MOLECULAR STRUCTURES.—Theory of atomic and molecular forces and the structure of matter. Lectures, conferences, and assigned problems. 6 s.h.
PROFESSOR LONDON

POLITICAL SCIENCE

PROFESSOR RANKIN, CHAIRMAN—308 LIBRARY; PROFESSOR WILSON, DIRECTOR OF GRADUATE STUDIES—405 NEW TOWER, LIBRARY; PROFESSORS COLE, CONNERY, HALLOWELL, AND VON BECKERATH; ASSOCIATE PROFESSOR BRAIBANTI

The Department of Political Science offers graduate work leading to the A.M. and Ph.D. degrees. Instruction is designed to prepare the student for teaching, for government service, and for other work related to public affairs. Before undertaking graduate study in political science, a student is ordinarily expected to have completed at least 12 semester hours of course work in political science, including some work in American government.

Fields of political science in which instruction is at present offered for candidates for the degree of Doctor of Philosophy are the following: American Government and Constitutional Law; Comparative Government; Political Theory; American State and Local Government; International Law; Public Administration. Candidates for the degree of Doctor of Philosophy who propose to major in political science must elect five fields, including Comparative Government and Political Theory; at least one of the five fields must be taken in a department other than the Department of Political Science.

In 1954-55 the courses planned are 207, 209, 221, 223, 224, 225, 226, 227-228, 229, 230, 231, 235, 241, 246, 271, 291, 310, 321, 325, 328, and 341.

FOR SENIORS AND GRADUATES

207. AMERICAN CONSTITUTIONAL LAW AND THEORY.—A study of leading principles of American government, as developed through judicial interpretation of the Constitution. 3 s.h.
PROFESSOR RANKIN

209. PROBLEMS IN STATE AND LOCAL GOVERNMENT IN THE UNITED STATES.—A study of the historical development of state and local governments, their present organizations and subdivisions, and their relation to each other. Special attention is given to the position of the states in the federal union through the study of federal-state, inter-state, and state-local relations. 3 s.h.

PROFESSOR RANKIN

211. POLITICAL INSTITUTIONS OF THE FAR EAST.—An analysis of the ideas underlying the development of government in Japan, China, and Korea. Study of the writings of Lao-tse, Confucius and the sacred books of Buddhism and Shinto. Particular attention is given to the theory of Confucian bureaucracy, the Taikwa Reform, the development of the Tokugawa administrative state, the constitutional reforms of Sun-Yat-sen in China and of the Meiji Era in Japan. 3 s.h.

ASSOCIATE PROFESSOR BRAIBANTI

212. INTERNATIONAL POLITICS OF THE FAR EAST.—An analysis of the relations of China, Japan, and Korea *inter se* and with outside powers, with emphasis upon changing power relationships within the Asian cultural sphere. 3 s.h.

ASSOCIATE PROFESSOR BRAIBANTI

221. INTERNATIONAL PUBLIC ORGANIZATION.—A study of the structure and functioning of the United Nations organs, of related specialized agencies such as the International Labor Organization, and of regional agencies such as the Organization of American States. 3 s.h.

PROFESSOR WILSON

223. POLITICAL THOUGHT TO THE SEVENTEENTH CENTURY.—A survey from the time of Plato to the close of the seventeenth century; Graeco-Roman, Patristic and Germanic thought; individualism and cosmopolitanism; effect of the Church-State controversy and the conciliar movement; medieval constitutionalism; legislative sovereignty. 3 s.h.

PROFESSOR WILSON

224. MODERN POLITICAL THEORY.—An historical survey and philosophical analysis of political theory from the beginning of the seventeenth to the middle of the nineteenth century. Attention is given to the rise of liberalism, the Age of Enlightenment, the romantic and conservative reaction, idealism and utilitarianism. 3 s.h.

PROFESSOR HALLOWELL

225. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European constitutional government and politics. 3 s.h.

PROFESSOR COLE

226. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European authoritarian and dictatorial government and politics. 3 s.h.

PROFESSOR COLE

227-228. INTERNATIONAL LAW.—Elements of international law, particularly as interpreted and applied by the United States; rights and duties of states with respect to recognition, state territory and jurisdiction, nationality, diplomatic and consular relations, treaties, treatment of aliens, pacific settlement of disputes, international regulation of the use of force, and collective security. 6 s.h.

PROFESSOR WILSON

229. RECENT AND CONTEMPORARY POLITICAL THEORY.—The rise of positivism and its impact upon modern political thought, the origins of socialism, Marxism and its variants, socialism in the Soviet Union, nationalism, Fascism and National Socialism, the crisis in modern democracy, Christianity and the social order. 3 s.h.

PROFESSOR HALLOWELL

230. AMERICAN POLITICAL INSTITUTIONS.—A study of the formation and development of institutions of the national government in the United States, with historical and analytical treatment. Among other topics this course is concerned with the Constitutional Convention of 1787, and the development of Congress, the Presidency, and the Supreme Court. 3 s.h.

PROFESSOR RANKIN

231. AMERICAN POLITICAL THEORY.—An analysis of the main currents in American political thought from colonial beginnings to the present day, with emphasis upon the development of liberalism in America. 3 s.h.

PROFESSOR HALLOWELL

235. **THE BRITISH COMMONWEALTH.**—An analysis of the political relationships between the members of the Commonwealth and a comparative study of the governments of the Dominions, with particular reference to Canada. 3 s.h.
PROFESSOR COLE

241. **ADMINISTRATIVE MANAGEMENT.**—An advanced course in public administration with special attention being given to the development of scientific management, its application to government in the United States and a consideration of current problems in organization, procedures, work simplification, and management improvement. 3 s.h.
PROFESSOR CONNERY

242. **NATIONAL ADMINISTRATION.**—A study of the administrative organization, working concepts and procedures of the United States Government, illustrated through the operations of the Bureau of the Budget. 3 s.h.
PROFESSOR CONNERY

246. **GOVERNMENT ADMINISTRATION AND PUBLIC POLICY.**—Through use of the laboratory and case study techniques, a consideration of the types of administrative problems that the United States Government encounters in the field of public policy, and their possible solution. 3 s.h.
PROFESSOR CONNERY

271. **SOCIOPOLITICS AND CAPITALISM.**—Labor and labor policies in Western Europe and the United States in the nineteenth and twentieth centuries; the development of monopoly power and political power of labor in recent decades. 3 s.h.
PROFESSOR VON BECKERATH

291. **PROBLEMS OF MUNICIPAL GOVERNMENT.**—An analysis of problems relating to the structural system and activities of municipalities in the United States. 3 s.h.
PROFESSOR RANKIN

292. **MUNICIPAL ADMINISTRATION.**—A study of principles and methods relating to municipal administration in the United States. 3 s.h. PROFESSOR RANKIN

FOR GRADUATES

301-302. **DEPARTMENTAL GRADUATE SEMINAR.**—An introduction to research methodology, inter-disciplinary relationships and current research problems. Required of all graduate majors in political science. No credit.

PROFESSORS WILSON, RANKIN, COLE, HALLOWELL, CONNERY, BRAIBANTI,
OTHER MEMBERS OF THE FACULTY AND VISITING LECTURERS

310. **SEMINAR IN STATE GOVERNMENT.**—Open to students who have completed course 209 or its equivalent. 3 s.h.
PROFESSOR RANKIN

311. **SEMINAR IN FAR EASTERN POLITICS.**—Open to students who have completed course 211 or its equivalent. 3 s.h.

321. **SEMINAR IN POLITICAL THEORY.**—Open to students who have completed 6 semester hours in Political Science 223, 224, 229, 231 or their equivalents. 3 s.h.
PROFESSOR HALLOWELL

325. **SEMINAR IN COMPARATIVE GOVERNMENT.**—Open to students who have completed courses 225 and 226 or their equivalents. 3 s.h. PROFESSOR COLE

328. **SEMINAR IN INTERNATIONAL LAW.**—Open to students who have completed course 227-228 or its equivalent. 3 s.h.
PROFESSOR WILSON

341. **SEMINAR IN PUBLIC ADMINISTRATION.**—Open to students whose admission is approved by the instructor. 3 s.h.
PROFESSOR CONNERY

RELATED COURSES IN OTHER DEPARTMENTS

Economics 233, 237-238, 315, 316, 329, 365; History 215-216, 217-218, 233-234, 261-262; Philosophy 208; Religion 224, 394; Sociology 382.

RELATED COURSE WORK IN THE SCHOOL OF LAW

There may be graduate credit for course work completed in the Duke University School of Law, under the regulations referred to on page 44 of this *Bulletin*.

PSYCHOLOGY

PROFESSOR RODNICK, CHAIRMAN—107 BIVINS HALL; PROFESSOR ZENER, DIRECTOR OF GRADUATE STUDIES—205 PSYCHOLOGICAL LABORATORY; PROFESSOR RODNICK, DIRECTOR OF CLINICAL TRAINING; PROFESSORS ADAMS, DAI, KOCH, KUDER, AND LUNDHOLM; ASSOCIATE PROFESSORS BANHAM, COHEN, AND KIMBLE; ASSISTANT PROFESSORS BORSTELMANN, COLLIER, GARMETZ, AND GUTTMAN

The Department of Psychology offers advanced work in general experimental psychology leading to the A.M. and Ph.D. degrees and in clinical psychology leading to the Ph.D. only.

Whatever the field of psychology in which a student eventually specializes, he is required to have a thorough background in the facts, methods, and theories of general psychology. Graduate programs are arranged to achieve this common background primarily during the first year, with specialization in course work reserved for subsequent years.

Normally, the candidate for the Ph.D. degree is expected, by the end of his second year, in addition to having worked out a program of studies, to have passed his language examinations, a departmental qualifying examination in his area of intended doctoral research, and the preliminary examination. By this time also his doctoral dissertation subject should be formulated. Emphasis is laid upon the completion of the dissertation, directed by a member of the staff, demonstrating competence and independence in the investigation of an original and significant problem.

As an integral part of their academic work during the first, second and fourth years, students specializing in clinical psychology will undertake field work in a variety of clinical settings. In addition, they will normally spend the third year in an appropriate, approved internship. The fourth year will be spent in residence at Duke University to complete the dissertation.

The field of minor work is not restricted, but it may be pointed out that the fields most relevant to graduate study in psychology are philosophy of science, sociology and anthropology, physiology, neuroanatomy, mathematics, and education.

Further details concerning the program of studies in psychology may be obtained from the Director of Graduate Studies in Psychology.

For 1954-55 the courses planned are 201-202, 203, 206, 209, 212, 215, 221-222, 223 (second semester only), 265, 266, 303-304, 305, 306, 308, 309, 310, 312, 313, 320, 322, 335-336, 341, 342, 371.

FOR SENIORS AND GRADUATES

201-202. PROSEMINAR.—An integrated core curriculum in general psychology, designed to provide an advanced background in the principles, and the empirical and theoretical methods, of the major fields of psychology. The topics include: scientific methods in psychology, biological foundations of behavior, motivation, learning, perception, behavior development, personality, the social determinants of behavior, and contemporary psychological theories. Required of all first year students. 9 s.h. each semester.

PROFESSORS ADAMS, KOCH, KUDER, RODNICK, AND ZENER;
ASSOCIATE PROFESSOR KIMBLE; ASSISTANT
PROFESSORS COLLIER AND GUTTMAN

203. DYNAMIC PSYCHOLOGY: CONATION AND OUR CONSCIOUS LIFE.—A systematic presentation of the psychology of adult human achievements, adaptive as well as creative, with emphasis upon the significance of these endeavors of the acts of experiencing. 3 s.h.

PROFESSOR LUNDHOLM

206. SOCIAL PSYCHOLOGY.—Kinds of membership character; psychology of social movements; propaganda; revolution; nationalism; war. 3 s.h.

PROFESSOR ADAMS

209. EXPERIMENTAL METHODS IN PSYCHOLOGY.—A study of methods for the identification, control, and recording of essential variables in psychological situations, with emphasis upon the relation of experimental techniques to problem formulation. Laboratory, lectures, and discussions. 3 s.h.

PROFESSOR ZENER; ASSOCIATE PROFESSOR KIMBLE;
ASSISTANT PROFESSORS COLLIER AND GUTTMAN

212. PHYSIOLOGICAL PSYCHOLOGY.—An advanced study of the interrelationships between psychological and physiological processes. 3 s.h.

ASSISTANT PROFESSOR GUTTMAN

215. DEVELOPMENTAL PSYCHOLOGY.—The environmental forces conditioning the development of personality structure and the mechanisms contributing to psychological growth; critical periods in character formation from infancy to senescence. 3 s.h.

PROFESSOR ADAMS

221-222. PROPRATICUM.—Lectures, demonstrations and practice in the use of basic procedures, projective and non-projective, employed in clinical psychology; principles of interpretation and reporting of test findings. Laboratory periods will be held in clinical field facilities. 3 s.h. each semester.

ASSISTANT PROFESSOR GARMEZY AND ALL MEMBERS
OF THE CLINICAL STAFF

223. ABNORMAL PSYCHOLOGY.—A systematic presentation of the psychology of functional mental disorders with emphasis on its bearing upon general psychological theory. 3 s.h.

PROFESSOR LUNDHOLM

236. THEORETICAL PSYCHOLOGY.—This course is devoted to the analysis of techniques of theory construction in psychology. The discussion of these methodological issues is co-ordinated with the analysis of concrete formulations in contemporary psychological theory. 3 s.h.

PROFESSOR KOCH

265. FUNDAMENTAL STATISTICAL PROCEDURES IN PSYCHOLOGY.—An introduction to the topics of distribution functions, large and small sample analyses, analysis of variance and experimental design. Prerequisite: Psychology 120 or equivalent. 3 s.h. [Second semester only.]

ASSISTANT PROFESSOR COLLIER

266. ADVANCED STATISTICS OF PSYCHOLOGICAL INVESTIGATION.—A continuation of Psychology 265 with the treatment of the following topics: non-parametric methods, correlation, multiple and partial correlation, and curve fitting. Prerequisite: Psychology 265. 3 s.h.

ASSISTANT PROFESSOR COLLIER

303-304. RESEARCH.—2 or 3 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

305. PSYCHOPATHOLOGY.—An examination of behavior disorders, with particular emphasis on explanatory concepts and the evidence from research in this field. 3 s.h.

PROFESSOR RODNICK

306. SEMINAR IN DEVELOPMENTAL PSYCHOLOGY.—2 or 3 s.h.

PROFESSOR ADAMS

308. SEMINAR IN PSYCHOPATHOLOGY AND PERSONALITY THEORY.—3 s.h.

PROFESSOR RODNICK

309. PROBLEMS OF LEARNING.—3 s.h.

ASSOCIATE PROFESSOR KIMBLE

310. SEMINAR: SELECTED PROBLEMS IN THE DYNAMICS OF BEHAVIOR.—3 s.h.

PROFESSOR ZENER

312. SEMINAR IN THEORETICAL PSYCHOLOGY.—3 s.h.

PROFESSOR KOCH

320. SEMINAR IN THE THEORY OF MENTAL TESTS.—3 s.h.

PROFESSOR KUDER

322. SEMINAR IN PERSONNEL PSYCHOLOGY.—3 s.h.

PROFESSOR KUDER

335-336. CLINICAL PSYCHOLOGY PRACTICUM.—Seminar discussion and supervised field experience in the application of basic psychological procedures and principles to clinical cases in a variety of institutional settings. Prerequisite: Psychology 221 and 222. 3 s.h. fall semester, 6 s.h. spring semester.

ASSOCIATE PROFESSOR COHEN AND ALL MEMBERS
OF THE CLINICAL STAFF

341. SOCIETY, CULTURE AND BEHAVIOR DISORDERS.—A critical survey of current theories of the structure and genesis of psychoneurosis, with particular stress on psychoneurotic disturbances as problems of the self in relation to society and culture. 3 s.h. PROFESSOR DAI

342. PRINCIPLES OF PSYCHOTHERAPY.—A critical study of the current methods of treating behavior disorders, such as brief psychoanalytic therapy, non-directive methods and group procedures. Stress is laid on integration of the best workable procedures into a set of psychotherapeutic principles in a socio-psychological frame of reference as discussed in Psychology 341, which is a prerequisite: Case material will be used for purposes of illustration. 3 s.h. PROFESSOR DAI

371. PRE-SCHOOL BEHAVIOR PROBLEMS.—3 s.h.

ASSOCIATE PROFESSOR BANHAM

RELATED COURSES IN OTHER DEPARTMENTS

Education 208A, 208B, 209, 217, 227, 228, 258, 318; Philosophy 104, 203, 208, 223, 224, 232, 242, 301, 331-332a; Sociology and Anthropology 212, 238, 243, 246, 249, 271, 276, 330, 380; Zoology 229, 324, 341, 351-352, 355-356; Physiology 261-262; Anatomy 204.

RELIGION

PROFESSOR SMITH, DIRECTOR OF GRADUATE STUDIES—308 DIVINITY SCHOOL; PROFESSORS BEACH, CLARK, CUSHMAN, DAVIES, PETRY, AND STINESPRING; ASSISTANT PROFESSORS BROWNLEE AND SCHAFER

The Department of Religion offers graduate work leading to the A.M. and Ph.D. degrees. Students may major in one of three fields: (1) Biblical Studies; (2) Studies in Church History; and (3) Studies in Christian Thought. They will be expected to take such courses in one or both of the other fields as will conduce to an adequate understanding of their chosen fields of specialization.

In addition to course work in these major fields, students will take such other courses in cognate fields as will contribute to the enrichment of their major studies. For those majoring in Biblical Studies, courses in ancient language and literature are suggested; for those majoring in Church History, courses in history are suggested; and for those majoring in Studies in Christian Thought, courses in philosophy, political science, and sociology are suggested.

Students who intend to become candidates for the Ph.D. degree should take the required language examinations in both French and German not later than the beginning of the second year of residence.

For 1954-55 the courses planned are 201-202, 217, 220, 305, 309, 310, 311, 312, 313, 314, 316, 317, 319, 321, 322, 323, 324, 328, 331, 332, 334, 336, 391-392, 393, 394, 397, 398, 495, 498.

FIELD I. BIBLICAL STUDIES

201-202. FIRST HEBREW.—The principles and structure of the Hebrew language with translation of selected Old Testament narratives. 6 s.h.

PROFESSOR STINESPRING

205-206. ARABIC.—Introduction to the classical language and literature with some attention to the modern idiom. Hours to be arranged. 6 s.h.

PROFESSOR STINESPRING

207-208. SECOND HEBREW.—Samuel or Kings the first semester and Isaiah the second. 6 s.h.

ASSISTANT PROFESSOR BROWNLEE

217. THE NEW TESTAMENT IN GREEK.—Extensive reading of the Greek text of the New Testament, with special emphasis upon its interpretation. 3 s.h.

PROFESSOR CLARK

218. GALATIANS AND I CORINTHIANS.—A detailed study of two of Paul's major epistles, based on the Greek text. 3 s.h.

PROFESSOR DAVIES

220. I PETER AND THE GOSPEL OF JOHN.—A detailed study of two of the non-Pauline writings of the New Testament. The course will be based on the Greek text. 3 s.h. PROFESSOR DAVIES

301. THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in Post-Exilic Judaism. 3 s.h. ASSISTANT PROFESSOR BROWNLEE

304. ARAMAIC.—A study of the Aramaic portions of the Old Testament, and selected passages from the Targums, Midrashes, and Talmuds. Hours to be arranged. 3 s.h. PROFESSOR STINESPRING

305. THIRD HEBREW.—A study of late Hebrew prose, with readings from Chronicles, Ecclesiastes, and the Mishnah. Hours to be arranged. 3 s.h. PROFESSOR STINESPRING

306. ADVANCED HEBREW.—A course on the Dead Sea Scrolls. 3 s.h. ASSISTANT PROFESSOR BROWNLEE

307. SYRIAC.—A study of the script and grammar, with readings from the Syriac New Testament and other early Christian documents. Some knowledge of Hebrew and Aramaic prerequisite. 3 s.h. PROFESSOR STINESPRING

309. HISTORY OF THE ANCIENT NEAR EAST.—A specialized study of the civilizations of Egypt, Palestine, Syria, and Mesopotamia in the light of Biblical archaeology. 3 s.h. PROFESSOR STINESPRING

310. OLD TESTAMENT PROPHECY.—The prophetic movement in Israel with special emphasis on the prophets of the eighth century B.C. 3 s.h. PROFESSOR STINESPRING

311. THE LIFE AND TEACHINGS OF JESUS.—A study of the events and sayings of the historical Jesus, in the light of His mission. 3 s.h. PROFESSOR CLARK

312. ADVANCED NEW TESTAMENT THEOLOGY.—An examination of the central aspects of New Testament theology. 3 s.h. PROFESSOR DAVIES

313. THE APOSTOLIC FATHERS.—A study of the Christian development from Clement of Rome to Polycarp (90-155 A.D.), with readings in the Greek text. 3 s.h. PROFESSOR CLARK

314. PATRISTIC THOUGHT.—A study of the development of early Christian doctrine to the period of Irenaeus. 3 s.h. PROFESSOR DAVIES

316. HELLENISTIC RELIGIONS.—A study of the Gentile religions in the Roman Empire, at the beginning of the Christian era. 3 s.h. PROFESSOR CLARK

317. THE SYNOPTIC GOSPELS.—A detailed study of their characteristics and contents, based upon the Greek text, with attention to their respective sources and to the development of synoptic criticism. 3 s.h. PROFESSOR CLARK

318. TEXTUAL CRITICISM OF THE NEW TESTAMENT.—A study of the scientific recovery of the Greek text on which modern versions are based; manuscript discoveries; principles of textual criticism; practice in collating original manuscripts in the Duke collection. 3 s.h. PROFESSOR CLARK

319. JUDAISM AND EARLY CHRISTIANITY.—A special study of the relation between Judaism and early Christianity. 3 s.h. PROFESSOR DAVIES

RELATED COURSES IN OTHER DEPARTMENTS

Greek 257; Latin 258; Aesthetics, Art, and Music 215, 216.

FIELD II. STUDIES IN CHURCH HISTORY

330. THE CHURCH IN EUROPE SINCE 1800.—Emphasis is placed on the relation of the Church to the social, economic, and political life of Modern Europe. 3 s.h. PROFESSOR PETRY

331. THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian Church prior to the Protestant Reformation. 3 s.h. PROFESSOR PETRY

332. THE MEDIEVAL CHURCH.—Outstanding characteristics of the Medieval Church, emphasizing theory, polity, institutions, sacraments, and worship. 3 s.h. PROFESSOR PETRY

334. CHURCH REFORMERS AND CHRISTIAN UNITY.—The work of such reformers as Marsilius of Padua, William of Ockham, Jean Gerson, Pierre d'Ailly, and Nicholas of Cusa in relation to ecclesiastical schism and the search for Christian unity through representative councils. 3 s.h. PROFESSOR PETRY

336. HISTORY OF CHRISTIAN RENUNCIATION IN THE MIDDLE AGES.—A study of the renunciatory ideal and spiritual practices with special reference to Benedictines, Franciscans, Lowland Mystics, and leading seculars. 3 s.h. PROFESSOR PETRY

RELATED COURSES IN OTHER DEPARTMENTS

History 221-222, 225-226; Ancient Languages and Literatures 257-258.

FIELD III. STUDIES IN CHRISTIAN THOUGHT

224. CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory. 3 s.h. PROFESSOR CUSHMAN

321. PLATONISM AND CHRISTIANITY.—An analysis of Plato's religious philosophy and a survey of its continuing influence in Hellenistic and Christian thought. 3 s.h. Prerequisite: Permission of the instructor. PROFESSOR CUSHMAN

322. THEOLOGY AND PHILOSOPHY IN THE NINETEENTH CENTURY.—Protestant thought from Schleiermacher to Troeltsch together with representative theologians of Britain. 3 s.h. PROFESSOR CUSHMAN

323. HISTORY OF CHRISTIAN THOUGHT I.—An historical study of theology in the ancient and medieval church. 3 s.h. ASSISTANT PROFESSOR SCHAFER

324. HISTORY OF CHRISTIAN THOUGHT II.—An historical study of theology from the Reformation. 3 s.h. ASSISTANT PROFESSOR SCHAFER

325. PHILOSOPHICAL THEOLOGY I.—Main problems in the history of philosophical theology. 3 s.h. PROFESSOR CUSHMAN

326. PHILOSOPHICAL THEOLOGY II.—Historical and constructive approach to the problem of faith and reason. 3 s.h. PROFESSOR CUSHMAN

328. SEMINAR IN TWENTIETH CENTURY CONTINENTAL AND BRITISH THEOLOGY.—Critical examination of the thought of Barth, Brunner, Berdyaev, Maritain, F. R. Tennant, and William Temple. 3 s.h. PROFESSOR CUSHMAN

391. HISTORICAL TYPES OF CHRISTIAN ETHICS I.—A critical study of representative statements of Christian ethical theory, through the early Reformation. Prerequisite: C.E. 27 or its equivalent. 3 s.h. MR. BEACH

392. HISTORICAL TYPES OF CHRISTIAN ETHICS II.—A continuation of C.E. 391, from the Reformation through current Christian ethical theory. Prerequisite: C.E. 391. 3 s.h. MR. BEACH

393. THE CHRISTIAN INTERPRETATION OF HISTORY.—A comparative examination of the chief secular and Christian theories of history current in Western thought. 3 s.h. PROFESSOR BEACH

394. CHRISTIANITY AND THE STATE.—The relation of the Christian theory of the State to political problems, with special consideration of the religious assumptions underlying democratic theory and practice and of the relationship of church to state. 3 s.h. PROFESSOR BEACH

395. RELIGIOUS THOUGHT IN COLONIAL AMERICA.—Consideration of the principal types of Protestant thought in colonial culture. 3 s.h. PROFESSOR SMITH

396. AMERICAN RELIGIOUS THOUGHT IN THE NINETEENTH CENTURY.—Comparative exposition of Orthodoxy and Liberalism. 3 s.h.

PROFESSOR SMITH

397. CURRENT AMERICAN THEOLOGY.—Critical appraisal of conflicting tendencies in American theological thought. 3 s.h.

PROFESSOR SMITH

398. MODERN AMERICAN CHRISTOLOGY.—An analysis of the historical development of modern American conceptions of the person and work of Christ. 3 s.h.

PROFESSOR SMITH

495. SEMINAR: JONATHAN EDWARDS AND JOHN WESLEY.—A comparative study of the major theological works of Edwards and Wesley. 2 s.h.

PROFESSOR SMITH

498. SEMINAR: THEOLOGY OF PAUL TILLICH.—An examination of Tillich's philosophical theology. 2 s.h.

PROFESSOR SMITH

RELATED COURSES IN OTHER DEPARTMENTS

Political Science 229, 231.

OTHER COURSES

Certain other courses listed in this bulletin and the *Bulletin of the Divinity School* may be taken for graduate credit provided that at the time of registration they are approved by the Director of Graduate Studies in Religion and by the Dean of the Graduate School.

ROMANCE LANGUAGES

PROFESSOR JORDAN, CHAIRMAN—214 CARR; PROFESSOR WALTON, DIRECTOR OF GRADUATE STUDIES—213 CARR; VISITING LECTURER KENISTON; PROFESSORS DAVIS AND PREDMORE; ASSOCIATE PROFESSOR CASTELLANO; ASSISTANT PROFESSOR DEMOREST

The Department of Romance Languages offers graduate work leading to the A.M. and Ph.D. degrees. In order to undertake graduate study in this Department, the student should normally have credit for four years of college courses in the chosen language, or 18 semester hours beyond the conventional two units offered at entrance to college. In addition to this minimum requirement, the student should have had one semester of review in composition and grammar.

It is recommended that candidates for the A.M. degree take a second Romance Language as the minor subject.

A candidate for the Ph.D. degree should be equipped to follow graduate courses in a second Romance Language. For this degree some training in Romance Linguistics will be required, the amount to be determined by the Department upon consideration of the student's preparation in the field.

Graduate students in this Department will be required to maintain oral practice in their major language through non-credit exercises provided by the Department.

For 1954-55 there will be offered throughout the year at least three courses in each language.

FRENCH

FOR SENIORS AND GRADUATES

210. THE AGE OF RICHELIEU.—An introduction to French life and thought in the literature of the early seventeenth century. The transition from the Renaissance to classical culture. Discussions of the baroque, the *Libertins*, the scientific rationalists, the Counter Reformation. Extensive reading in Corneille and Pascal. Lectures in French. 3 s.h.

ASSISTANT PROFESSOR DEMOREST

213. FRENCH CLASSICISM.—Its initial phase. Readings from Malherbe, Molière, Racine, Boileau, La Fontaine, La Rochefoucauld, Madame de Sévigné, La Bruyère, and others. 3 s.h.

PROFESSOR WALTON

214. FRENCH CLASSICISM.—Its final phase. Readings from Fontenelle, Saint-Simon, Abbé Prévost, Marivaux, Lesage, Montesquieu, Voltaire, and others. Main emphasis on Voltaire. 3 s.h. PROFESSOR WALTON

215, 216. THE MODERN FRENCH NOVEL.—A survey of the novel form from the seventeenth to the twentieth century, with particular attention to the analysis of fundamental literary trends; classicism, rationalism, romanticism, and realism. 6 s.h. PROFESSOR JORDAN

225. POLITICAL AND RELIGIOUS LITERATURE IN THE ROMANTIC PERIOD.—The Romantic outlook as it shapes political and religious literature from the Consulate to the Revolution of 1848. The mystics of conservatism, the prophets of a Romantic faith, and the heralds of a social republic. Lectures in French. 3 s.h. ASSISTANT PROFESSOR DEMOREST

227. FRENCH POETRY SINCE THÉOPHILE GAUTIER.—Readings from the principal figures of the Parnassian and Symbolist movements, including Baudelaire, Leconte de Lisle, Heredia, Verlaine, Rimbaud, Mallarmé and Régnier. 3 s.h. PROFESSOR WALTON

238. ANATOLE FRANCE.—Analysis of the principal phases of his work and its relation to the French tradition. Reading of his poetry, *Le Crime de Sylvestre Bonnard*, *Thaïs*, *Le Jardin d'Épicure*, *Les Dieux ont Soif*, *Le Lys Rouge*, *L'Île des Pingouins*, parts of *La Vie Littéraire*. 3 s.h. PROFESSOR WALTON

FOR GRADUATES

323, 324. REALISM AND NATURALISM.—Literary doctrines and practices in the generation of 1850-90, with particular reference to the background of scientific thinking. 6 s.h. PROFESSOR JORDAN

325, 326. FRENCH LITERATURE IN THE SIXTEENTH CENTURY.—Main attention is given to Rabelais, Montaigne, Marot, Ronsard, Du Bellay. Principal movements treated are: Humanism, Hellenism, Platonism, Petrarchism, the Pléiade. 6 s.h. PROFESSOR WALTON

333, 334. CONTEMPORARY FRENCH LITERATURE.—The twentieth century is examined mainly with reference to the originality of its contribution in the domain of ideas and literary forms. Only the leading figures are read extensively: Rolland, Gide, Proust, Duhamel, Valéry. 6 s.h. PROFESSOR JORDAN

350. NINETEENTH-CENTURY FRENCH CRITICISM.—A survey of critical doctrines and practices from Sainte-Beuve to the end of the century, including Brunetière, Faguet, Lemaître, France, Doumic and others. 3 s.h. PROFESSOR JORDAN

SPANISH

FOR SENIORS AND GRADUATES

230, 231. THE STORY OF THE SPANISH LANGUAGE.—How the sounds, forms, words, and sentence structure have changed from the speech of the Roman conquerors to the language which is spoken today in Spain and Spanish America. 6 s.h. PROFESSOR KENISTON

257. OLD SPANISH LANGUAGE.—The historical development of the language together with illustrative readings. 3 s.h. PROFESSOR DAVIS

258. OLD SPANISH LITERATURE.—The literature of the Middle Ages and Early Renaissance. 3 s.h. PROFESSOR DAVIS

260. ADVANCED COMPOSITION AND SYNTAX.—Study of fundamental difficulties in the language; practice in writing idiomatic Spanish; exercises in free composition. For students who have a satisfactory command of Spanish grammar and fair conversational ability. Prerequisite: Spanish 173-174 or permission. 3 s.h. ASSOCIATE PROFESSOR CASTELLANO

261. NINETEENTH CENTURY NOVEL.—A study of literary and social trends in the last half of the nineteenth century. Readings will be selected from the novels of Valera, Pereda, Galdós, Pardo, Bazán, Blasco Ibáñez, and their contemporaries. 3 s.h. PROFESSOR DAVIS

264. MODERN AND CONTEMPORARY SPANISH THEATER.—A brief review of the modern and contemporary Spanish Theater from the period of Romanticism. Lectures, reading and discussion of the most representative works of Benavente, Martínez Sierra, los hermanos Quintero, etc. 3 s.h.

ASSOCIATE PROFESSOR CASTELLANO

265. GOLDEN AGE LITERATURE: CERVANTES.—The life and thought of Cervantes with special emphasis on his *Quixote*. 3 s.h.

PROFESSOR PREDMORE

266. GOLDEN AGE LITERATURE: THE DRAMA.—Study of the chief Spanish dramatists of the seventeenth century with readings of representative plays of this period. 3 s.h.

ASSOCIATE PROFESSOR CASTELLANO

270. THE SPANISH LANGUAGE IN AMERICA.—Development of the Spanish language from the time of the Discovery to the present. 3 s.h.

PROFESSOR PREDMORE

275. CONTEMPORARY SPANISH LITERATURE.—Essay and Lyric Poetry. A study of the revision of national values and literary expression in the twentieth century with particular reference to the crisis of 1898 and to the enrichment of the Spanish tradition through extra-peninsular influences. 3 s.h.

PROFESSOR PREDMORE

276. CONTEMPORARY SPANISH LITERATURE.—Novel. A study of tradition and innovation in the twentieth century Spanish novel with emphasis on the novels of Unamuno, Baroja, Valle Inclán, and Pérez de Ayala. 3 s.h.

PROFESSOR PREDMORE

285. THE EARLY RENAISSANCE IN SPAIN (1474-1550).—The major aspects studied are: humanism, reformation and counter-reform, the beginnings of the theater, the Italianate poets, the impact of the New World, architecture and the arts. 3 s.h.

PROFESSOR KENISTON

286. THE LATER RENAISSANCE IN SPAIN (1550-1600).—The novel—chivalric, pastoral, picaresque—the emergence of the *comedia*, the ballads, the mystics, lyric poets, literary theory, architecture and the arts. 3 s.h.

PROFESSOR KENISTON

SOCIOLOGY AND ANTHROPOLOGY

PROFESSOR JENSEN, CHAIRMAN—215E SOCIAL SCIENCE BUILDING; PROFESSOR HART, DIRECTOR OF GRADUATE STUDIES—215D SOCIAL SCIENCE BUILDING; PROFESSOR THOMPSON; ASSOCIATE PROFESSORS LABARRE AND SCHETTLER; ASSISTANT PROFESSOR ROY

The Department of Sociology and Anthropology offers graduate work leading to the A.M. and Ph.D. degrees. Before undertaking advanced work in this department, a student must have completed a minimum of twelve semester hours of approved preliminary courses in the field, and twelve additional semester hours in the field or in related work. A student who is deficient in the minimum required work will be asked to take additional undergraduate courses agreed upon in conference with the Director of Graduate Studies.

Candidates for advanced degrees in sociology usually take minor work in psychology, economics, political science, education, history, or religion. Detailed requirements for the minor work, and for majors in other departments who wish to present sociology as minor work, may be obtained from the Director of Graduate Studies.

The courses planned for 1954-55 are 212, 213, 214, 215, 233, 235, 237, 238, 243, 246, 261, 271, 273, 276, 286, 288, 292, 293, 330, 340, 380, 381, 382, 391, 393. Either 91-92, 93 or 94, and 101 is prerequisite for all courses.

ANTHROPOLOGY

212. PRIMITIVE RELIGION.—The ethnography, the social functions and the socio-psychological meanings of religion in primitive societies. 3 s.h.

ASSOCIATE PROFESSOR LABARRÉ

213. PERSONALITY AND SOCIETY.—The sociology and social psychology of human personality, its origins in the primary group, its nature and varieties and its integrations into secondary group institutions. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

214. PERSONALITY AND CULTURE.—The influence of culture patterns and social institutions upon character structure, socialization of the individual, and the dynamics of human personality. Comparative anthropological materials will be drawn upon. Prerequisite: course 213. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

(Admission to 213 and 214 only by consultation with the instructor.)

215. THE AMERICAN INDIAN.—A comprehensive survey of the Indians of North and South America, including a study of origins and prehistory, archaeology, physical anthropology, languages, material culture, social and political organization, economics and religion, discussed in terms of the "culture area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

217. THE PEOPLES OF AFRICA, ASIA, AND OCEANIA.—A comprehensive survey of the non-European peoples of the Old World, covering available pre-history, archaeology, racial affiliations, languages, material culture, social and political organization, economics, and religion, discussed in terms of the "culture area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

330. SEMINAR IN ANTHROPOLOGY.—A seminar for advanced students who wish to pursue individual studies in racial or cultural anthropology. 1 to 3 s.h. *each semester.*

ASSOCIATE PROFESSOR LABARRE

COMMUNITY, RACE AND CULTURE

233. RURAL SOCIOLOGY.—The sociology of the land; peasant and folk societies and cultures; patterns of rural settlement like the farm, the plantation, the ranch and others; rural personality types; the changing character of rural life; rural problems. 3 s.h. *Second semester.*

PROFESSOR THOMPSON

235. URBAN SOCIOLOGY.—A study of the city and civilization, the newspaper, the social survey, the slum and housing, neighborhoods and natural areas, urban institutions, urban problems, and city planning. 3 s.h.

PROFESSOR THOMPSON

237. COMMUNITY AND SOCIETY.—This course seeks to provide a frame of reference for the analysis and ordering of facts pertaining to the diverse cultures of the world, the State, the world community, the Great Society, news, mass behavior, social problems, races and classes. 3 s.h.

PROFESSOR THOMPSON

238. RACE AND CULTURE.—A study of the nature of race and of the relationships and problems of race. 3 s.h.

PROFESSOR THOMPSON

340. SEMINAR.—Methodological problems involved in the study of race relations, urban and rural life, the South and society generally. 3 s.h. *each semester.*

PROFESSOR THOMPSON

COLLECTIVE BEHAVIOR

243. SOCIAL ATTITUDES AND COLLECTIVE BEHAVIOR.—Study of attitudes as products of social interaction; organization of attitudes into personal behavior patterns; expression of social attitudes in social, political and industrial groups; social unrest and the behavior of crowds and mobs; analysis of social movements, strikes, revolutions, and other group organizations. 3 s.h.

ASSOCIATE PROFESSOR SCHETTLER

246. PUBLIC OPINION AND PROPAGANDA.—Nature and development of public opinion; relation to attitudes, biases, stereotypes and controversial issues; role of leaders, pressure groups and minority groups; use of radio, press, motion picture and graphic arts; propaganda and censorship; measurements of public opinion. 3 s.h.

ASSOCIATE PROFESSOR SCHETTLER

250. MARRIAGE AND THE FAMILY.—An analysis of contemporary marriage and family experience with emphasis on its functions, problems, resources and values. Not open to students who have received credit for Religion 170. 3 s.h.

PROFESSOR HART

SOCIAL ORGANIZATION AND DISORGANIZATION

261. PROBLEMS IN INDUSTRIAL SOCIOLOGY.—Sociological analysis of human relations problems that confront administrators of industrial institutions and leaders in industrial community life. In this course emphasis falls on the examination of concrete case materials and the appraisal of published research with consideration of possibilities for further development of scientific procedures in the field of industrial sociology. 3 s.h.

ASSISTANT PROFESSOR ROY

271. SOCIAL PATHOLOGY.—A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society; natural disasters, poverty, physical defectiveness, malnutrition, mental deficiency, mental disease, undirected leisure activities and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. (Not open to students who have had Sociology S274.) 3 s.h.

PROFESSOR JENSEN

273. SPECIAL PROBLEMS IN SOCIAL PATHOLOGY.—Research projects in social and personal disorganization, limited to advanced students with the approval of the instructor. 1 to 3 s.h. *each semester*.

PROFESSOR JENSEN

276. CRIMINOLOGY.—A study of the original tendencies of man and the problem of socializing these tendencies; the relation of physical and mental defectiveness and untoward influence in the home and neighborhood to crime; the development of criminological theory and procedure, emphasizing penal and reform methods, and especially modern methods of social treatment and prevention of crime. 3 s.h.

PROFESSOR JENSEN

380. SEMINAR IN APPLIED SOCIOLOGY.—Special research problems in social pathology, child welfare, criminology, and related topics. 1 to 3 s.h. *each semester*.

PROFESSOR JENSEN

SOCIAL THEORY

286. SOCIAL ETHICS.—A study of sociological fundamentals underlying ethics, including the controversy between materialistic and idealistic social thinkers, the nature of personalities and of social organization, the nature of social values, types of social interaction and their effects upon general social values, underlying principles and facts of social change, and the bearings of all these upon certain social problems. 3 s.h.

PROFESSOR HART

288. CONTEMPORARY PROBLEMS IN CULTURAL LAG.—An exploration of such sociological problems as social evolution, cultural lag, conflict, accommodation, leadership, and social reform, in relation to the crisis of civilization precipitated by the development of the atomic bomb and by kindred discoveries and inventions. 3 s.h.

PROFESSOR HART

381. PRINCIPLES OF SOCIOLOGY.—A critical study of sociological theory. The sociological theories of recent writers will be critically examined with a view to laying the foundation for a constructive theory of the social life in modern biology and psychology. Discussions and papers by the class. 3 s.h.

PROFESSOR JENSEN

382. HISTORY OF SOCIOLOGICAL THEORY.—Lectures on the development of social thought from Aristotle to the present; the social philosophies of Plato, Aristotle, St. Augustine, Thomas Aquinas, Machiavelli, Bodin, Hobbes, Locke, Vico, Montesquieu, Rousseau, Condorcet, and the sociological systems of Conte, Spencer, Schäffle, Lilienfeld, Gumplowicz, Ratzenhofer, and Ward will, among others, be considered. A large amount of assigned reading will be required in this course. The student is advised to correlate this course with related courses in economics, history, political science, and philosophy. 3 s.h.

PROFESSOR JENSEN

METHODS OF SOCIAL RESEARCH

292. STATISTICAL TECHNIQUES IN SOCIOLOGY.—Intended for graduate students, and for undergraduates who are ready to undertake original statistical research projects. 3 s.h. (*first semester*.) PROFESSOR HART

293. SPECIAL PROBLEMS IN SOCIAL STATISTICS.—Applications of statistical techniques to specific research topics; limited to advanced students with permission of the instructor. 1 to 3 s.h. PROFESSOR HART

391. SEMINAR IN SOCIAL STATISTICS.—Special research problems in social statistics, social ethics, the family or related topics. 1 to 3 s.h. PROFESSOR HART

393. OPERATIONAL SOCIOLOGY.—A seminar for advanced students, presenting an operational philosophy of social science as a basis for research in sociology. Examples of operational procedure will be analyzed. Assigned projects will embody applications of the operational method. Prerequisite: one of the following: Sociology 292 or Economics 237-238, or Education 209, or Mathematics 124, or some other acceptable course in statistics. 3 s.h. PROFESSOR HART

RELATED COURSES IN OTHER DEPARTMENTS

Economics 215, 216, 217; Philosophy 205; Political Science 223, 224; Psychology 206.

ZOOLOGY

PROFESSOR GRAY, CHAIRMAN—218 BIOLOGY BUILDING; PROFESSOR WILBUR, DIRECTOR OF GRADUATE STUDIES—328 BIOLOGY BUILDING; PROFESSOR SCHMIDT-NIELSEN;

ASSOCIATE PROFESSORS BOOKHOUT, HUNTER, AND ROBERTS;

ASSISTANT PROFESSORS BAILEY, HORN, AND NACE

To undertake study toward an advanced degree in zoology a student should have completed an undergraduate major in zoology or its equivalent. This normally amounts to twenty-four or more hours of course work distributed among various fields of zoology, and must include comparative vertebrate anatomy or vertebrate zoology, embryology, and physiology. At least a year of chemistry is required. Physics is recommended. Candidates for the doctorate will be expected to have had not less than two years of chemistry and a year of botany. For some phases of zoology, organic chemistry is essential.

Required work for the A.M. ordinarily includes 18 semester hours of advanced course work in zoology, six semester hours of course work in a minor department, and an acceptable thesis.

Candidates for the Ph.D. degree are expected to be broadly trained zoologists. The program of each candidate is determined by a committee which reviews previous training and sets specific requirements to be met. Normally the program includes one or more graduate courses in each of several fields of zoology; courses in a minor subject; wide reading in science in general and in biology in particular; research; and a dissertation based on original work. A first draft of the thesis must be submitted to the major professor by March 15 of the year in which the degree is to be conferred.

For 1954-55 the courses planned are 204, 222, 238, 252, 271, 276, 278, 303, 307, 343, 351-352, 353-354, 355-356.

FOR SENIORS AND GRADUATES

204. ADVANCED PARASITOLOGY.—Lectures, conferences, readings, and laboratory work dealing with practical and theoretical problems of classification, morphology, and host relations of animal parasites. Prerequisite: Zoology 161. 4 s.h. ASSOCIATE PROFESSOR HUNTER

222. ENTOMOLOGY.—Anatomy, physiology, embryology, and classification of insects. Prerequisite: one year of zoology. 4 s.h. PROFESSOR GRAY

224. VERTEBRATE ZOOLOGY.—A study of the life histories, adaptations, ecology, and classification of vertebrate animals. Prerequisite: Zoology 53. 4 s.h. PROFESSOR GRAY

229. ENDOCRINOLOGY.—The structure, physiology, and embryology of the endocrine glands. Lectures, reading assignments, reports, and laboratory work. Prerequisites: Zoology 53, 92. 4 s.h.

238. SYSTEMATIC ZOOLOGY.—The fundamental theory and practice involved in the collection, identification and classification of animals. Prerequisite: Zoology 1 and 2. 4 s.h.
ASSISTANT PROFESSOR BAILEY

252. COMPARATIVE PHYSIOLOGY.—The physiological mechanisms of animals studied on a comparative basis. Prerequisite: Zoology 151 or equivalent. 4 s.h.

PROFESSOR SCHMIDT-NIELSEN

253. ADVANCED VERTEBRATE MORPHOLOGY.—Lectures, reports and reading assignments in the comparative morphology of the vertebrates, with particular emphasis on theories concerning the interrelationships of vertebrates, and the origin of certain vertebrate structures. Advanced laboratory study in selected groups of vertebrates. Prerequisites: Zoology 53, 92. 4 s.h.

ASSISTANT PROFESSOR HORN

271. CELLULAR PHYSIOLOGY.—The physiological processes of living matter approached through studies of cells. Prerequisites: two years of biology and at least one year of chemistry. 4 s.h.

PROFESSOR WILBUR

274. INVERTEBRATE ZOOLOGY.—A study of structure, functions, and habits of invertebrate animals under normal and experimental conditions. Field trips will be made to study, collect, and classify animals in their natural habitats. Prerequisites: Zoology 1 and 2. 4 s.h.

ASSOCIATE PROFESSOR BOOKHOUT

276. PROTOZOOLOGY.—The morphology, physiology, taxonomy, and culture of protozoa. Prerequisites: Zoology 1 and 2. 4 s.h.

ASSOCIATE PROFESSOR BOOKHOUT

278. INVERTEBRATE EMBRYOLOGY.—Lectures, readings and laboratory work dealing with rearing, development and life history of invertebrates. Prerequisite: Zoology 92. 4 s.h.

ASSOCIATE PROFESSOR BOOKHOUT

FOR GRADUATES

303. ECOLOGY.—Relation of animals to environment. Lectures, readings, reports, conferences; laboratory and field work. 4 s.h.

PROFESSOR GRAY

307. FOUNDATIONS OF ZOOLOGY.—Lectures, readings, and discussions on the background and training essential for a professional zoologist. 2 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

324. ADVANCED PHYSIOLOGY.—Recent advances in physiology. Lectures, conferences and laboratory work. Prerequisite: Zoology 252 or 271. 4 s.h.

PROFESSORS SCHMIDT-NIELSEN AND WILBUR

328. EXPERIMENTAL EMBRYOLOGY.—Lectures, readings, reports and laboratory work. Prerequisites: Zoology 53, 92, 156, 271, or equivalent. 4 s.h.

ASSISTANT PROFESSOR NACE

343. CYTOLOGY.—The structure of the cell. Lectures, readings, reports and laboratory work. Prerequisites: Zoology 53, 92, 156, or equivalent. 4 s.h.

ASSOCIATE PROFESSOR ROBERTS

351-352. ZOOLOGICAL JOURNAL CLUB.—A weekly meeting of graduate students and Faculty to hear reports and to discuss biological facts, theories, and problems. One hour a week throughout the year. Required of all graduate students who major in zoology. 2 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

353-354. RESEARCH.—Students who have had proper training may carry on research under direction of members of the Staff in the following fields. Hours and credits to be arranged.

(a) EMBRYOLOGY.

ASSISTANT PROFESSOR NACE

(b) PHYSIOLOGY.

PROFESSORS SCHMIDT-NIELSEN AND WILBUR

(c) HISTOLOGY, CYTOLOGY.

ASSOCIATE PROFESSOR ROBERTS

(d) INVERTEBRATE ZOOLOGY, INVERTEBRATE HISTOLOGY AND EMBRYOLOGY. ASSOCIATE PROFESSOR BOOKHOUT

(e) ECOLOGY, ENTOMOLOGY, VERTEBRATE ZOOLOGY. PROFESSOR GRAY

(f) VERTEBRATE MORPHOLOGY AND MORPHOGENESIS. ASSISTANT PROFESSOR HORN

(g) PARASITOLOGY. ASSOCIATE PROFESSOR HUNTER

(h) VERTEBRATE ZOOLOGY. ASSISTANT PROFESSOR BAILEY

355-356. SEMINAR.—One or more seminar courses in particular fields are given by various members of the Staff. These will be in the fields indicated under courses 353-354 above. 2 s.h.

COURSES IN THE MEDICAL SCHOOL OPEN TO GRADUATE STUDENTS

PROFESSORS BEARD, F. BERNHEIM, CONANT, FADIE, EVERETT, HALL, HANDLER, HETHERINGTON, MARKEE, D. T. SMITH, AND TAYLOR; ASSOCIATE PROFESSORS BECKER, M. L. C. BERNHEIM, DUKE, KORKES, PEELE, PENROD, RUNDLES, AND SCHWERT

The facilities of the several Departments of the Medical School listed below are available to qualified graduate students, already admitted to the Graduate School, for independent or supervised research and investigation, whether or not they are working toward advanced degrees.

Graduate students wishing to pursue a major or minor in any of the following departments, or to enroll in any of the courses listed below, should consult or write the appropriate Director of Graduate Studies: Anatomy, Professor J. E. Markee; Microbiology, including Mycology, Parasitology and Hematology, Professor D. T. Smith; Biochemistry and Nutrition, Professor Philip Handler; Physiology and Pharmacology, Professor F. G. Hall.

Because of the special schedules maintained in the Medical School, graduate students should write the Director of Graduate Studies of the department in which they are interested to ascertain the precise dates when courses are offered.

ANATOMY

Completion of training equivalent to that required of an undergraduate majoring in biology is prerequisite for these courses in human anatomy.

M201. GROSS HUMAN ANATOMY.—A course especially designed for graduate students, comprising a complete dissection of the cadaver. The laboratory work is supplemented by conferences which place emphasis on the biological aspects of the subject. Oct.-Feb. Hours and credits (maximum 8 s.h.) by arrangement. Prerequisite: adequate training in comparative anatomy and embryology.

PROFESSORS MARKEE AND EVERETT; ASSOCIATE PROFESSORS BECKER AND DUKE

M202. MICROSCOPIC ANATOMY.—Conferences and laboratory work on the morphological characteristics of the tissues of the animal body. The work is based upon a study of fresh and prepared material and is approached from the physiological viewpoint. Oct.-Feb. Hours and credits (maximum 3 s.h.) by arrangement. Prerequisite: adequate training in histology or cytology.

PROFESSORS MARKEE, HETHERINGTON, AND EVERETT; ASSOCIATE PROFESSORS BECKER AND DUKE

M203. ANATOMY OF THE NERVOUS SYSTEM.—A study of the gross and microscopic structure of the human central nervous system, special attention being paid to the structural and functional relationships between the various nuclei and fiber tracts. Oct.-Feb. Hours and credits (maximum 4 s.h.) by arrangement. Prerequisite: Anatomy M201.

PROFESSORS MARKEE AND EVERETT; ASSOCIATE PROFESSORS PEELE, BECKER, AND DUKE

M204. NEUROANATOMICAL BASIS OF BEHAVIOR.—A study of the gross and microscopic anatomy of the nervous system with emphasis on the structural and functional relationships between tracts, nuclei, and cortical areas. Insofar as possible the result of deficit in a system or systems will be demonstrated by motion picture aids, and the mechanisms involved will be reviewed and discussed. Restricted to graduate students with the equivalent of a major in psychology. 3 s.h.

PROFESSOR HETHERINGTON

M312. RESEARCH.—Individual investigations in the various fields of anatomy. Credits to be arranged.

PROFESSORS MARKEE, EVERETT, HETHERINGTON;
ASSOCIATE PROFESSORS PEELE, DUKE, AND BECKER

BIOCHEMISTRY AND NUTRITION

The program of graduate studies in biochemistry is designed primarily for Ph.D. candidates who intend to pursue a research career in this field. Candidates for the A.M. degree only are not encouraged to apply for admission and are accepted only under exceptional conditions. Preference is given to students who have completed one year of graduate work in chemistry, physics, or biology at Duke University or at some other approved institution. As preparation for courses in advanced chemistry, the student must have completed college courses in analytical geometry and elementary calculus. He also must have had adequate preparation for the reading examination in French and German, which is required of candidates for the Ph.D. degree.

M241. GENERAL BIOCHEMISTRY AND NUTRITION.—Three lectures, four laboratory periods of three hours each, one two-hour seminar weekly for eighteen weeks. Prerequisites: general chemistry, organic chemistry, physical and analytical chemistry, and at least one year of college biology. Feb.-June. 8 s.h.; without laboratory work, 3 s.h.

PROFESSORS HANDLER AND TAYLOR; ASSOCIATE PROFESSORS
M. L. C. BERNHEIM, SCHWERT, AND KORKES, AND DR. KAMIN

M242. BIOCHEMICAL PREPARATIONS.—Laboratory work with conferences when necessary. This course involves detailed study of the chemistry of enzymes, proteins, fats, carbohydrates and derivatives. Prerequisite: Biochemistry M241 or its equivalent. Hours by arrangement. 2, 3, or 4 s.h.

PROFESSOR HANDLER; ASSOCIATE PROFESSORS M. L. C.
BERNHEIM, KORKES, AND SCHWERT

M341. THEORIES AND METHODS OF PHYSICAL BIOCHEMISTRY.—A lecture and seminar course on basic physical concepts and experimental methods in the study of biological compounds and systems. With demonstrations. Given alternately with M343-344. 2 s.h.

ASSOCIATE PROFESSOR SCHWERT

M343-344. BIOCHEMISTRY OF PROTEINS AND ENZYMES.—A lecture and seminar course devoted to the chemical, physical and biological properties of proteins and enzymes. In the first semester, general aspects of protein chemistry will be considered; in the second semester specific proteins and enzyme systems will be reviewed. Given alternately with M341. 4 s.h.

ASSOCIATE PROFESSOR SCHWERT

M345-346. SEMINAR.—Required of all graduate students majoring in biochemistry, one hour per week. 2 s.h.

PROFESSORS HANDLER AND TAYLOR; ASSOCIATE PROFESSORS
M. L. C. BERNHEIM, SCHWERT, AND KORKES

M347-348. BIOCHEMICAL RESEARCH.—A laboratory course in which the students are introduced to specialized concepts and methods currently employed in biochemical research. This will be accomplished by rotating assignment of the students to the various special laboratories of the department. Prerequisite: Biochemistry M241 or its equivalent. 2, 3, or 4 s.h.

PROFESSORS HANDLER AND TAYLOR; ASSOCIATE PROFESSORS
M. L. C. BERNHEIM, SCHWERT, AND KORKES

M349-350. INTERMEDIARY METABOLISM.—A seminar course devoted to a study of the detailed mechanisms of carbohydrate, fat and protein metabolism. Given alternately with Biochemistry M351-352. Prerequisite: Biochemistry M241 or its equivalent. 4 s.h.
 PROFESSOR HANDLER

M351. NUTRITION.—A seminar course in which the chemical and physiological behavior of essential nutritional factors is considered, as well as the nature of deficiency states. Prerequisite: Biochemistry M241 or its equivalent. Given alternately with Biochemistry M349-350. 2 s.h.
 PROFESSOR HANDLER

M354. BIOCHEMISTRY OF DISEASE.—A lecture and seminar course in the biochemical aspects of the pathogenesis, diagnosis, and therapy of diseases of metabolism. 2 s.h.
 PROFESSOR HANDLER

MICROBIOLOGY

M221. BACTERIOLOGY AND IMMUNOLOGY.—This course is devoted primarily to the study of the biological and immunological relationships of microorganisms (bacteria, fungi, Rickettsia, and viruses) in disease. It is not a course in bacteriologic technique. An additional course in technical methods is provided for those who require it. Five lectures, two 1-hour conferences and three laboratory periods of 3 hours each weekly, in fall quarter. Prerequisites: courses in general zoology, general botany, histology and comparative anatomy, general and organic chemistry. 6 s.h.
 PROFESSOR D. T. SMITH AND ALL
 MEMBERS OF THE GRADUATE STAFF

M322. IMMUNOCHEMISTRY.—A seminar dealing with the fundamentals of immunological reactions in general and with the chemistry of antigen-antibody reactions in particular. 2 s.h.

M323. ADVANCED BACTERIOLOGY AND IMMUNOLOGY.—This course is intended primarily for graduate students majoring in bacteriology, but it is also available as a minor to other graduate students in related fields, to whom it is recommended by respective supervising committees and with the approval of the Department of Bacteriology. Prerequisites: Bacteriology and Immunology, M221. 8 s.h.
 PROFESSOR D. T. SMITH

M324. RESEARCH SEMINAR ON VIRUSES.—Limited to advanced students. 2 s.h. per semester.
 PROFESSOR BEARD

M325. MEDICAL MYCOLOGY.—This course is intended to familiarize the graduate student majoring in mycology with the fungi causing disease in man and animals. The course includes practical laboratory work with materials from patients in Duke Hospital and those sent to the Duke Fungus Registry from outside sources. Prerequisites: A.M. in botany with major in mycology and M221. Course limited to four students each year. 8 s.h.
 PROFESSOR CONANT

HEMATOLOGY

M211. Three lectures and three laboratory periods of 3 hours each, weekly, for eleven weeks in the spring quarter. Prerequisites: courses in general zoology, general botany, histology and comparative anatomy. 4 s.h. ASSOCIATE PROFESSOR RUNDLES

MEDICAL PARASITOLOGY

M291. MEDICAL PARASITOLOGY.—One lecture and one three-hour laboratory period per week for eleven weeks during the fall quarter. Prerequisites: courses in Zoology 204, general botany, histology and comparative anatomy. 1 s.h.

PHYSIOLOGY AND PHARMACOLOGY

M261-262. HUMAN PHYSIOLOGY.—Six lectures and twenty laboratory hours per week. Prerequisites: Anatomy M201 and Biochemistry M241 (or equivalents) and at least one year of college physics. Feb.-June. Credits depending on work taken. (Maximum 8 s.h.)
 PROFESSOR HALL AND ALL MEMBERS
 OF THE GRADUATE STAFF

M365. RESPIRATION AND AERO-PHYSIOLOGY.—A study of the fundamental respiratory processes in living organisms, and of the special physiological responses and adjustments of the individual during high altitude flight. Lectures, conferences, laboratory. Prerequisites: M261-262 or equivalent. 4 s.h. PROFESSOR HALL

M369. PHARMACOLOGY. MODE OF ACTION OF DRUGS.—Studies and discussions of the pharmacological action of drugs in terms of biochemical and physiological processes. Lectures, conferences, and laboratory. Prerequisites: M261-262 or equivalent. 4 s.h. PROFESSOR F. BERNHEIM

M370. SEMINAR.—A weekly meeting of graduate students and staff in which papers reviewing classical and current physiological literature are reported. Required of all graduate students who are candidates for the A.M. or Ph.D. degree. 2 s.h. PROFESSORS HALL AND BERNHEIM;
ASSOCIATE PROFESSOR PENROD

M372. RESEARCH.—Individual investigations in the various fields of physiology. Credits to be arranged. PROFESSORS HALL AND BERNHEIM;
ASSOCIATE PROFESSOR PENROD

ADVANCED DEGREES CONFERRED JUNE 1, 1953

MASTER OF ARTS

Adams, Henry Bethune, III
Adcock, Louis Henry
Breitbart, Sidney
Bridges, Beverly Ann
Bunn, Ronald Freeze
Chamberlain, John Victor
Clark, Virginia Louise
Edwards, Thelma Catherine
Foss, John Huston
Frayser, Regina
Gable, Ralph William
Gatlin, Clyde Talmadge
Glickfield, Charlotte Woods
Haber, Pierre-Claude
Hart, Joseph Tate
Hausman, Carl Ransdell
Hawkins, Jean Ellen
Heckman, Richard Cooper
Herbert, Mary Eloise
Herron, E. Warren
Hodges, John Herbert
Holcomb, Shirley Lou
Johnson, Allen Saunders
Jones, Edward Lee, Jr.
Keefer, Truman Frederick
Klostermann, Janet Gay
Leake, Preston Hildebrand
Leake, William Walter
Lemos, Ramon Marcelino

Mansfield, Edwin
Marschka, Edwin Howard
Martin, Betty Jean
Maturo, Frank J. S., Jr.
McCormack, Jeanne Eagles
Milburn, John William
Morison, Gordon Calvin
Morris, Walton
Murphy, Frederick F.
Murray, Mary Jane
Noble, Lawrence Everman, Jr.
O'Brien, Janice Patricia
Pekkala, Salmie Anne
Peyton, Philip Barbour, Jr.
Pruette, Rowland Shaw
Ramsaur, Edmund George, Jr.
Reiser, John Shealy
Rock, William Ray
Rosenberg, Alexander F.
Simmons, Bowen Eugene
Southern, James Albert
Southern, Pauline Barnwell
Sperry, William Hartley
Stillwell, Edgar F.
TePaske, John Jay
Trapnell, Emily Annette
Upton, Anthony Frederick
Walker, Thomas Banner
Whitcombe, David Niles

MASTER OF EDUCATION

Lang, Alice Virginia

Morgan, Blanche Evelyn
Tovera, David Garcia

DOCTOR OF EDUCATION

KLEIN, RAYMOND LOUIS, B.S., Milwaukee Teachers College; M.A., State University of Iowa.
Dissertation: *A Critical Analysis of School Codes.*

MILNER, WILLIAM STARR, B.S., University of Georgia.
Dissertation: *Some Problems of Teaching in Public Schools as Confronted by Teachers and Student Teachers, with Reference to the Teacher Education Program at Bessie Tift College.*

NEWCOMER, RICHARD SEYLER, B.A., Ursinus College; A.M., Duke University.
Dissertation: *The Administration of the Extension Courses of the University of Maryland at Harmon Air Force Base in Newfoundland, 1951-1952.*

WALTON, WESLEY WILLS, B.S., Glassboro State Teachers College; M.Ed., Duke University.
Dissertation: *The Utilization of Armed Forces Training Research in Army Training Activities.*

DOCTOR OF PHILOSOPHY

ABBOT, WILLIAM WRIGHT, III, A.B., University of Georgia; A.M., Duke University.
Dissertation: *Georgia Under the Royal Governors, 1754-1775.*

- ABBOTT, SAMUEL LEE, JR., B.S., Middlebury College; M.S., University of Connecticut.
Dissertation: *A Study in Factor Analysis: Relationships Between Measures of Success in Arithmetic and Factors Obtained by Two Solutions.*
- ALLEN, RAY MAXWELL, A.B., Southwestern at Memphis; B.D., Duke University.
Dissertation: *The Christology of P. T. Forsyth.*
- ALLEN, WILLIAM RICHARD, A.B., Cornell College.
Dissertation: *Modern American Tariff Debates and the Trade Agreements Program.*
- BARNES, ROBERT DRANE, B.S., Davidson College.
Dissertation: *The Ecology of the Spiders of Non-Forest Maritime Communities at Beaufort, North Carolina.*
- BEVAN, JOHN MORGAN, A.B., Franklin and Marshall College; B.D., A.M., Duke University.
Dissertation: *Effects of Stress Upon Certain Physiological Mechanisms and Behavior of the Albino Rat.*
- BLEKE, ROBERT CHARLES, B.A., Swarthmore College.
Dissertation: *Reward and Punishment as Determiners of Reminiscence Effects in Schizophrenic and Normal Subjects.*
- BOYNTON, JOHN O'HARA, A.B., M.A., Florida State College for Women.
Dissertation: *A Theory of the Poor White: A Study in Race Relations.*
- BRAMLETTE, CARL ALLEN, JR., B.S., Presbyterian College.
Dissertation: *Some Relationships Between the Self-Concept, the Thematic Apperception Test, and Personality Adjustment.*
- BRANDIS, ROYALL, B.A., Richmond College; A.M., Duke University.
Dissertation: *Some Factors Affecting American Cotton Exports, 1929-1948.*
- BROWN, JOSHUA ROBERT CALLOWAY, A.B., A.M., Duke University.
Dissertation: *Histological Studies on the Adult of the Common Chigger.*
- BRYANT, RALPH CLEMENT, B.S., Yale University; M.F., Yale School of Forestry.
Dissertation: *The Economic Feasibility of a Permanent Pulp and Paper Industry in Central Colorado.*
- BURKUS, JOHN, B.S., Rutgers University.
Dissertation: *Kinetic Investigation of the Acylation of Methyl Ketones with Esters.*
- BYERS, GORDON CLEAVES, A.B., University of Michigan.
Dissertation: *Class Number Formulas for Quadratic Forms Over $GF[q, r]$.*
- CANON, ALFRED ORVILLE, A.B., Southwestern at Memphis; A. M., Duke University.
Dissertation: *The Constitutional Thought of Wiley Rutledge.*
- CARMEAN, WILLARD HANDY, B.S., Pennsylvania State College; M.F., Duke University.
Dissertation: *The Effect of Certain Physical Soil Properties and Topography on the Site Quality of Douglasfir in Southwestern Washington.*
- CARROLL, KENNETH LANE, A.B., B.D., Duke University.
Dissertation: *Scripture and the Early Church.*
- CASTOR, CHARLES ROBERT, B.S., Baylor University; A.M., Duke University.
Dissertation: *A Polarographic Study of Certain AZO Compounds.*
- CHERRY, LEONARD VICTOR, B.S., College of the City of New York.
Dissertation: *The Kerr Effect and Physical Properties of Some Aromatic Fluorine Compounds.*
- CHRISTISON, ISABEL B., B.A., University of Minnesota; A.M., Duke University.
Dissertation: *The Antifungal Activity of Some Organic Compounds Against Fungi Pathogenic for Man.*
- COHN, DAVID V., B.S., College of the City of New York.
Dissertation: *Parathyroid Hormone and the Renal Excretion of Phosphate.*
- COLVIN, RALPH WHITMORE, B.S., Lawrence College.
Dissertation: *An Experimental Analysis of Attitudinal Determinants Underlying Behavior to Color Stimuli in Psychoneurotic Subjects.*
- COX, GENE SPRACHER, B.S., M.F., Duke University.
Dissertation: *The Effect of Soil Properties on the Site Index of Loblolly Pine (Pinus Taeda L.) in the Southeastern Coastal Plain.*
- DRATZ, ARTHUR FREDERICK, A.B., Duke University.
Dissertation: *Renal Phosphate and Carbohydrate Metabolism.*
- DUNN, WILLIAM LAWRENCE, JR., B.S., Lynchburg College.
Dissertation: *Changes in the Visual Discrimination Behavior of Schizophrenic Subjects as a Function of the Meaning Content of the Stimulus.*
- EDGERTON, JESSE WILBERT, B.S., Guilford College; M.A., University of Florida.
Dissertation: *A Study of the Effects of Prolonged Psychological Stress upon Blood Pressure in Rats Predisposed Toward Hypertensive Levels by Early Acute Choline Deficiency.*
- GIBBS, NORMAN BRANTLEY, B.A., Southwestern at Memphis; B.D., Louisville Presbyterian Theological Seminary.
Dissertation: *The Problem of Revelation and Reason in the Thought of Charles Chauncy.*

- GIRDNER, JOHN BYRON, B.A., M.A., University of Utah.
Dissertation: *An Experimental Analysis of the Behavioral Effects of a Perceptual Consequence Unrelated to Organic Drive States.*
- GITLIN, EMMANUEL M., B.A., Texas Christian University; B.D., Duke University.
Dissertation: *Chronology of the Ancient Near East: Principles of Research.*
- GOLDSTONE, SANFORD, B.S., College of the City of New York.
Dissertation: *Flicker Fusion Measurements and Anxiety Level.*
- GREEN, CLAUD BETHUNE, A.B., M.A., University of Georgia.
Dissertation: *John Trotwood Moore, A Tennessee Man of Letters.*
- GREEN, IRVING, B.A., New York University; M.S., Fordham University.
Dissertation: *An Electrotitrimetric Method for the Study of ATPase Activity in Myosin Systems.*
- HALDE, CARLYN JEAN, B.A., M.A., University of California.
Dissertation: *The Relation of Nutrition to the Growth and Morphology of Trichophyton Concentricum Blanchard, 1896.*
- HAMILTON, THOMAS THEODORE, A.B., Central Missouri State College; A.M., Duke University.
Dissertation: *The Impact of the Shanghai Incident of 1932 upon the United States and the League of Nations.*
- HARDIN, HILLIARD FRANCES, A.B., A.M., Duke University.
Dissertation: *Studies of Quantitative Differential Agglutination and Quantitative Differential Hemolysis of Human Erythrocytes.*
- HARTZ, EDWIN RUBEN, A.B., Southwestern Missouri Teachers College; A.M., B.D., Duke University.
Dissertation: *The Role of the Institute in the Family Life Education Movement.*
- HILL, ROBERT MATTESON, A.B., Cornell University.
Dissertation: *Line, Line Width and Zeeman Studies of Oxygen Absorption Spectra.*
- HUTT, PAUL JONAS, B.S., A.M., Columbia University.
Dissertation: *Rate of Bar-Pressing by the White Rat During Periodic Reinforcement as a Function of the Quality and Quantity of the Food Reward.*
- HYLAND, KERWIN ELLSWORTH, JR., B.S., Pennsylvania State College; M.S., Tulane University.
Dissertation: *Studies on an Ectoparasitic Mite of the Genus Hannemania (Acarina: Trombiculidae).*
- JACKSON, WILLIAM THOMAS, B.S., Ohio State University; M.S., University of Tennessee.
Dissertation: *The Relative Importance of Factors Causing Flooding Injury of Plants and the Role of Adrenergic Roots in Recovery.*
- KING, WILLIAM CONNOR, A.B., Denison University.
Dissertation: *Microwave Spectroscopy in the Region from One to Two Millimeters.*
- KOHN, EDWARD MAURICE, B.S., College of the City of New York.
Dissertation: *The Kerr Constants of Some Aromatic Compounds in Benzene Solutions.*
- LAWTON, ROBERT OSWALD, JR., A.B., A.M., Duke University.
Dissertation: *Stock Comic Characters in Shakespeare, A Study of Their Relation to the Plot.*
- LOVELAND, CLARA OLDS, A.B., Wellesley College; A.M., Columbia University; B.D., Berkeley Divinity School.
Dissertation: *The Problem of Achieving Agreement on the Form of Government of the Protestant Episcopal Church in the United States of America 1780-1789.*
- MANLY, JETHRO OATES, B.S., William and Mary College.
Dissertation: *Marine and Brackish Water Diatoms of Beaufort, North Carolina.*
- MCCLEURKIN, DOUGLAS CHARLES, B.S.F., University of Georgia; M.F., Duke University.
Dissertation: *Soil and Climatic Factors Related to the Growth of Longleaf Pine in the Gulf Coastal Plain.*
- MOUDY, JAMES MATTOX, B.A., B.D., Texas Christian University.
Dissertation: *Bossuet and the Protestants: A Chapter in the Seventeenth-Century Struggle for Religious Allegiance in France.*
- MOWSHOWITZ, ISRAEL, B.A., Yeshiva College.
Dissertation: *The Study of the Perception of Jewish and Non-Jewish Faces as it is Related to Prejudice.*
- NEASE, FELTON REECE, B.A., M.S., University of Oklahoma.
Dissertation: *Contamination of Fission Products and its Effects on Plants Growing in the White Oak Creek Area, Tennessee.*
- PARRISH, ROBERT GUY, B.S., University of Wisconsin.
Dissertation: *The Preparation, Kydation and Molecular Kinetic Properties of Myosin.*
- POWELL, WILLIAM ALLAN, B.S., Wake Forest College.
Dissertation: *Fluorometric Methods of Fluoride Determination.*

- PUTERBAUGH, WALTER H., JR., A.B., Duke University.
Dissertation: *Synthesis of Beta-Hydroxy Compounds and Nitro Ketones. Influence of Metallic Cation in Aldol Condensation and Other Reactions.*
- REVELEY, WALTER TAYLOR, A.B., Hampden-Sydney College; B.D., Union Theological Seminary.
Dissertation: *A Christian Critique of Modern Liberal Democratic Theory as Reflected in the Writings of Jacques Maritain, A. D. Lindsay and Reinhold Niebuhr.*
- RICHTER, PEYTON ELLIOTT, A.B., Mercer University; M.A., Florida State University.
Dissertation: *The Metaphysical Foundations of Jordan's Aesthetics.*
- SCHALLER, HOWARD G., A.B., Duke University; M.A., Northwestern University.
Dissertation: *The Effects of Transfer Payments on Differences in State per Capita Incomes, 1929, 1939, and 1949.*
- SCOTT, HARLEY AUGUSTUS, JR., A.B., Duke University.
Dissertation: *The Empirical Assessment of Self Acceptance.*
- SHEPARD, MAURICE CHARLES, B.S., M.S., University of Wisconsin.
Dissertation: *The Significance of Pleuropneumonia-Like Organisms in Non-Gonococcal Urethritis.*
- TAYLOR, GEORGE AIKEN, A.B., Presbyterian College; B.D., Columbia Theological Seminary.
Dissertation: *John Calvin, the Teacher. The Correlation between Instruction and Nurture within Calvin's Concept of Communion.*
- TYCZKOWSKI, EDWARD ALBERT, B.S., Brown University.
Dissertation: *A New Type of Direct Fluorination Reactor and the Mild Fluorination of Carbon Disulfide and Methyl Sulfide.*
- WIEBE, HERMAN HENRY, B.A., Goshen College; M.A., State University of Iowa.
Dissertation: *A Study of Absorption and Translocation of Radioactive Isotopes in Various Regions of Barley Roots.*
- WORSHAM, JAMES ESSEX, JR., B.S., University of Richmond; M.S., Vanderbilt University.
Dissertation: *The Electric Moments and Kerr Effects of Some Monosubstituted Acid Amides.*
- ZAHNER, ROBERT, B.S., M.F., Duke University.
Dissertation: *The Effect of Soil Properties on Site Quality for Loblolly Pine in the Gulf Coastal Plain.*

ADVANCED DEGREES CONFERRED SEPTEMBER 1, 1952

MASTER OF ARTS

Abshire, Charles William	Hudson, Virginia La Frage
Bailey, Phoebe Crane	Joyner, Weyland Thomas, Jr.
Bowden, Elbert Victor	Kaufman, Willis Mast
de la Vega, Gloria	Lambert, Sarah Margaret
Dull, Frances Mae	Raup, William Wagner
Hamrick, James Lehman	Reynolds, Norman Lee
Hartman, Joan Edna	Thompson, Virginia Mary
Hiers, Billie Jean	Ziolkowski, Theodore Joseph

MASTER OF EDUCATION

Austin, Tollie Edward, Jr.	Nelson, Herman Berg
Craft, Stanley Irwin	O'Shinski, Wanda Henriette
Driskell, Martha Virginia	Raebeck, Charles Arlington
Hrubes, Helene Anna	Simpson, Lillian Norris
Webb, Margaret Juanita	

BULLETIN OF DUKE UNIVERSITY



Undergraduate Instruction

(Trinity College, the Woman's College, and the
College of Engineering)

ANNOUNCEMENTS FOR 1954-1955

VOLUME 26

March, 1954

NUMBER 5

Annual Bulletins

FOR GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

FOR BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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DUKE UNIVERSITY

TRINITY COLLEGE

THE WOMAN'S COLLEGE

THE COLLEGE OF ENGINEERING



ANNOUNCEMENTS FOR 1954-55



The Chapel Tower

(from an etching by Louis Orr)

The Chapel Tower dominates the scene of West, or the University, Campus, and it symbolizes the spiritual heritage of the University. The predominantly Gothic architecture, traditionally restless and aspiring, contributes to the intellectually stimulating atmosphere of the University and provides an appropriate setting for educational endeavors.

BULLETIN
OF
DUKE UNIVERSITY



UNDERGRADUATE INSTRUCTION

TRINITY COLLEGE
THE WOMAN'S COLLEGE
THE COLLEGE OF ENGINEERING

1953-1954

ANNOUNCEMENTS FOR 1954-1955

DURHAM, NORTH CAROLINA
1954

"I request . . . that great care and discrimination be exercised in admitting as students only those whose previous record shows a character, determination, and application evincing a wholesome and real ambition for life."

—JAMES B. DUKE.

Contents

	PAGE
CALENDAR OF THE COLLEGES.....	7
THE UNDERGRADUATE COLLEGES.....	8
OFFICERS OF THE UNIVERSITY.....	11
The Corporation.....	11
Officers Emeriti.....	12
Officers of Administration.....	13
Officers of Instruction.....	17
Other Officers.....	49
The University Libraries.....	53
ADMISSION TO COLLEGES.....	57
FINANCIAL INFORMATION AND LIVING ACCOMMODATIONS.....	60
THE LIBRARIES.....	78
THE RESERVE OFFICERS TRAINING CORPS.....	80
THE BUREAU OF TESTING AND GUIDANCE.....	82
THE APPOINTMENTS OFFICE.....	83
THE SUMMER SESSION.....	83
REGISTRATION AND ACADEMIC REGULATIONS.....	85
REQUIREMENTS FOR DEGREES.....	91
COURSES OF INSTRUCTION: TRINITY COLLEGE AND THE WOMAN'S COLLEGE.....	104
COURSES OF INSTRUCTION: THE COLLEGE OF ENGINEERING.....	177
STUDENT LIFE AND ACTIVITIES.....	185
HONORS AND PRIZES.....	194
INDEX	197

1954

JULY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

OCTOBER

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

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					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

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S	M	T	W	T	F	S
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17	18	19	20	21	22	23
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3	4	5	6	7	8	9
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24	25	26	27	28	29	30
31						

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30	31					

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24	25	26	27	28	29	30

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					1	2
3	4	5	6	7	8	9
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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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3	4	5	6	7	8	9
10	11	12	13	14	15	16
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31						

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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

					1	2
3	4	5	6	7	8	9
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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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3	4	5	6	7	8	9
10	11	12	13	14	15	16
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24	25	26	27	28	29	30

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23	24	25	26	27	28	29
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17	18	19	20	21	22	23
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3	4	5	6	7	8	9
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Calendar of the Colleges

1954

- September 16. Thursday, 7:30 P.M. Assembly for all entering freshmen; Freshman Orientation begins.
- September 16. Thursday, 7:30 P.M. Assembly for transfer students entering Trinity College and the College of Engineering.
- September 20. Monday. Registration and matriculation of former students of Trinity College and the College of Engineering, who have not pre-registered.
- September 21. Tuesday. Registration and matriculation of new students with advanced standing, Woman's College.
- September 22. Wednesday. Final registration of pre-registered students.
- September 23. Thursday. Fall semester classes begin.
- October 26. Tuesday. Examination in English Usage.
- November 8. Monday. Last day for reporting mid-semester grades.
- November 24. Wednesday, 5:00 P.M. Thanksgiving recess begins.
- November 29. Monday, 8:00 A.M. Classes are resumed.
- December 11. Saturday. Founders' Day.
- December 18. Saturday, 12:30 P.M. Christmas recess begins.

1955

- January 3. Monday, 8:00 A.M. Classes are resumed.
- January 15. Saturday, 12:30 P.M. Fall semester classes end.
- January 18. Tuesday. Final examinations begin.
- January 28. Friday. Final examinations end.
- January 31. Monday. Registration and matriculation of new students.
- February 1. Tuesday. Last day for matriculation for the spring semester.
- February 2. Wednesday. Spring semester classes begin.
- March 16. Wednesday. Last day for reporting mid-semester grades.
- March 26. Saturday, 12:30 P.M. Spring recess begins.
- April 4. Monday, 8:00 A.M. Classes are resumed.
- May 20. Friday, 5:00 P.M. Spring semester classes end.
- May 23. Monday. Final examinations begin.
- June 2. Thursday. Final examinations end.
- June 4. Saturday. Commencement begins.
- June 5. Sunday. Commencement Sermon.
- June 6. Monday. Graduating Exercises.

The Undergraduate Colleges



DUKE UNIVERSITY is built about a group of colleges which have their roots deep in the past. It was founded more than one hundred years ago when a number of earnest citizens from Randolph and adjacent counties assembled in a log school house to organize an educational society. They wished to provide lasting support for the local academy founded a few months before by an energetic son of North Carolina, Brantley York.

Moved by "no small share of philanthropy and patriotism," these men set forth their belief "that ignorance and error are the bane not only of religious but also of civil society" and that they "rear up almost an impregnable wall between man and the happiness he so ardently pants after." On that basis they formally adopted a constitution for the Union Institute Society. Thus in February, 1839, the academy became Union Institute. Twelve years later the Institute was reorganized as Trinity College. In 1892 it was moved from the fields of Randolph County to the growing city of Durham. Thirty-two years later the College grew into Duke University. With increasing enrollment and the development of specialized needs the Woman's College was formed in 1925 and the College of Engineering in 1938.

From academy to university the basic principles have remained constant. The University motto, *Eruditio et Religio*, reflects a fundamental faith in the union of knowledge and religion, the advancement of learning, the defense of scholarship, the love of freedom and truth, a spirit of tolerance, and a rendering of the greatest service to the individual, the state, the nation, and the church. Through changing generations of students the objective has been to encourage each individual to achieve to the extent of his capacities an understanding and appreciation of the world in which he lives, his relationship to it, his opportunities, and his responsibilities.

Duke University is concerned with developing the whole man. In its classrooms, libraries, and laboratories it is concerned with his mental and moral development, in its gymnasiums and on its playing fields, with his physical growth, and in its Chapel and religious program, with his spiritual well being. Although it has always been closely associated with the Methodist Church, Duke welcomes students of all faiths and encourages them to develop their spiritual lives in accordance with the tenets of their own creeds. The need of training for specialized professions and employments is recognized, but such training is incidental to a larger purpose. Through the variety of the

subject matter, the insistence on a common core of fundamental courses, and an emphasis on a more intensive study of some selected subject, the colleges seek to give their students a knowledge and appreciation of the culture of the Western World and at the same time to provide a foundation for careers in business and the professions.

The three colleges exist as parts of a university community in which the student has full opportunity to take part. They have a unique role in this community as the centers of individual education for undergraduates, but as members of the University the colleges share in the extensive facilities of laboratory and field work, superior physical equipment, great libraries, and able faculties which only a major university can provide. They share the same campuses with the Graduate School of Arts and Sciences, the Law School, the Medical and Nursing Schools, the Divinity School, the School of Forestry, and the Duke Hospital. A wide range of activities, religious, intellectual, cultural, social, and athletic, is open to the entire University community. At the same time there are other activities and organizations designed specifically for members of each undergraduate college. The student may thus enjoy both the activities and the atmosphere of a small college and the broader facilities and challenges provided by the existence of a university community.

Although the three colleges have separate identities, they are closely inter-related. Students of Trinity College and the College of Engineering live in the same dormitories, belong to the same fraternities, hold membership in the same student government association, attend classes in the same buildings. The College of Engineering provides for the specialized interests of its students by offering training in technical fields. At the same time it recognizes the importance of the study of the humanities because it realizes that the engineer has definite responsibilities as a citizen and that these responsibilities cannot be properly stressed in the purely technical curricula. Engineering students, therefore, participate in the academic and extra-curricular life of the liberal arts college as well as in the training and campus activities peculiar to their own college.

As one of the colleges within the University system the Woman's College shares the advantages of the wider community, and yet it offers to its students the special opportunities which belong to a separate woman's college. Women students receive training in leadership by administering their own organizations and by participating in community projects. At the same time they have the stimulus which comes from co-educational classes and from the experience of working with men of other colleges in campus activities.

Whether in the classroom or on the campus the emphasis is on the individual. To this end, classes are kept small in size and close contact between professor and student is encouraged. Instructors, counsellors,

advisers, and administrative officers are interested in the student as a person. In turn the student is expected to accept the responsibility of contributing to his own development, to his college, and to his university. The relationship of mutual service between the individual student and his college is designed to develop men of intelligence, integrity, and culture. From this relationship there has grown through a century and more a sense of achievement and high competence that enables Duke men and women to make their place in the world as effective citizens whatever their careers may be.

Officers of the University for the Year 1953-54



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The Executive Committee of the University consists of three members from the University Trustees, three from the Endowment Trustees, and the President of the University.

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Charlotte, N. C.
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Charlotte, N. C.
Mount Airy, N. C.
Laurinburg, N. C.
Charlotte, N. C.
Troy, N. C.

* Died, June 26, 1953.

† Resigned, May 30, 1953.

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 ALEXANDER HAMILTON SANDS, JR.
 JAMES BUREN SIDBURY
 JAMES RAYMOND SMITH
 ESTELLE FLOWERS SPEARS
 WALTER ALBERT STANBURY
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Professor Emeritus of Greek

406 Buchanan Boulevard

ARTHUR MARCUS PROCTOR, Ph.D.
Professor Emeritus of Education

2106 Myrtle Drive

WILLIAM WALTER RANKIN, JR., M.A.
Professor Emeritus of Mathematics

1011 Gloria Avenue

GILBERT THEODORE ROWE, S.T.D., D.D., Litt.D.
Professor Emeritus of Christian Doctrine

150 Pinecrest Road

* Died, December 8, 1953.

† Died, May 12, 1953.

MRS. BESSIE WHITTIED SPENCE, A.M., B.D.	3629 Hope Valley Road, Hope Valley
<i>Assistant Professor Emeritus of Biblical Literature</i>	
HERSEY EVERETT SPENCE, B.D., D.D., Litt.D.	3629 Hope Valley Road, Hope Valley
<i>Professor Emeritus of Religious Education</i>	
MRS. MARY HENDREN VANCE, A.M.	New Bern, N. C.
<i>Assistant Professor Emeritus of English</i>	
ALBERT MICAJAH WEBB, A.M.	1017 Trinity Avenue
<i>Professor Emeritus of Romance Languages</i>	
ALBAN GREGORY WIDGERY, M.A.	152 Pinecrest Road
<i>Professor Emeritus of Philosophy</i>	
ROBERT NORTH WILSON, M.S.	822 Third Street
<i>Professor Emeritus of Chemistry</i>	
EDWARD HUDSON YOUNG, A.M.	107 Watts Street
<i>Assistant Professor Emeritus of Romance Languages</i>	

Officers of Administration

GENERAL ADMINISTRATION

ARTHUR HOLLIS EDENS, Ph.D., LL.D.	2138 Myrtle Drive
<i>President of the University</i>	
WILLIAM HANE WANNAMAKER, A.M., Litt.D.	615 West Campus
<i>Vice-Chancellor of the University</i>	
PAUL MAGNUS GROSS, Ph.D.	3816 Dover Road, Hope Valley
<i>Vice-President in the Division of Education</i>	
CHARLES EDWARD JORDAN, A.B., LL.D.	813 Vickers Avenue
<i>Vice-President in the Division of Public Relations</i>	
HERBERT JAMES HERRING, M.A., LL.D.	2010 Myrtle Drive
<i>Vice-President in the Division of Student Life</i>	
ALFRED SMITH BROWER, A.B.	614 West Campus
<i>Business Manager and Comptroller</i>	
CHARLES BLACKWELL MARKHAM, A.M.	204 Dillard Street
<i>Treasurer of the University</i>	

EDUCATIONAL ADMINISTRATION

PAUL MAGNUS GROSS, Ph.D.	3816 Dover Road, Hope Valley
<i>Vice-President in the Division of Education, and Dean of the University</i>	
RICHARD LOVEJOY TUTHILL, Ed.D.	1014 Gloria Avenue
<i>University Registrar</i>	

The Colleges

ROBERTA FLORENCE BRINKLEY, Ph.D.	East Campus
<i>Dean of the Woman's College</i>	
HERBERT JAMES HERRING, M.A., LL.D.	2010 Myrtle Drive
<i>Dean of Trinity College</i>	
WALTER JAMES SEELEY, E.E., M.S.	1005 Urban Avenue
<i>Dean of the College of Engineering</i>	
ALAN KREBS MANCHESTER, Ph.D.	2016 Myrtle Drive
<i>Dean of Undergraduate Studies</i>	
WILLIAM COUNCILL ARCHIE, Ph.D.	2310 Cranford Road
<i>Associate Dean of Trinity College</i>	

- ROBERT B. COX, A.M.
Dean of Undergraduate Men 1107 Ninth Street
- ELLEN HARRIS HUCKABEE, A.M.
Dean of Undergraduate Instruction, Woman's College 1507 W. Pettigrew Street
- MARIANNA DUNCAN JENKINS, Ph.D.
Associate Dean of Undergraduate Instruction, Woman's College 1026 Minerva Avenue
- LEWIS J. McNURLEN, M.A.
Assistant Dean of Freshmen and Sophomores, Trinity College 1818 Glendale Avenue
- LANIER W. PRATT, M.A.
Assistant Dean of Trinity College 2007 Ruffin Street
- MARY GRACE WILSON, A.M.
Dean of Undergraduate Women Faculty Apartments
- MRS. ELIZABETH ANDERSON PERSONS, A.M.
Director of Admissions, Woman's College 612 Swift Avenue
- EVERETT BROADUS WEATHERSPOON, A.B.
Director of Admissions, Trinity College and the College of Engineering 125 Pinecrest Road
- WILLIAM LAMBRETH BRINKLEY, JR., A.B.
Assistant Director of Admissions, Trinity College and the College of Engineering 202 Faculty Apartments, East Campus
- *JOHN C. DUNSON, A.B.
Field Secretary, Undergraduate Admissions Box 4261, Duke Station
- †ELIZABETH LASSITER, A.B.
Field Secretary, Undergraduate Admissions 506 Buchanan Boulevard
- BROOKS MILTON WAGGONER, B.D., Ph.D.
Field Secretary, Undergraduate Admissions 506 Buchanan Boulevard
- PATRICIA COHAN, A.B.
Field Secretary, Undergraduate Admissions No. D9, Westover Park Apartments
- MARGARET L. COLEMAN, A.M.
Recorder, Trinity College and the College of Engineering 918 Urban Avenue
- ANNE INMAN, B.S.
Administrative Assistant, Graduate School 1406 Duke University Road
- HELEN MILDRED KENDALL, A.B.
Administrative Assistant and Secretary of the Faculty, Divinity School Faculty Apartments
- LOUISE SEABOLT, A.M.
Recorder, Woman's College Faculty Apartments
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- ‡EDWARD L. ADAMS, JR., Ph.D.
Senior Counselor, Bureau of Testing and Guidance Box 71B, Route 1, Old Chapel Hill Road
- ROBERT MERLE COLVER, Ed.D.
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- J. ALBERT SOUTHERN, A.B.
Psychometrist, Bureau of Testing and Guidance 862 Louise Circle, Poplar Apartments

Graduate and Professional Schools

- CHARLES SACKETT SYDNOR, M.A. (Oxon.), Ph.D., Litt.D., LL.D.
Dean of the Graduate School of Arts and Sciences 116 Pinecrest Road

* Resigned, July 31, 1953.

† Resigned, May 31, 1953.

‡ Resigned, August 31, 1953.

CHARLES EUGENE WARD, Ph.D.	
<i>Director of Admissions, Graduate School of Arts and Sciences</i>	2429 Perkins Road
JAMES CANNON, A.M., Th.M., D.D.	
<i>Dean of the Divinity School</i>	2022 Myrtle Drive
CLARENCE FERDINAND KORSTIAN, Ph.D.	
<i>Dean of the School of Forestry</i>	4 Sylvan Road
JOSEPH A. MCCLAIN, JR., J.S.D., LL.D.	
<i>Dean of the School of Law</i>	2021 Myrtle Drive
WILBURT CORNELL DAVISON, D.Sc., M.D., LL.D.	
<i>Dean of the School of Medicine</i>	Hope Valley
FLORENCE K. WILSON, R.N., M.A.	
<i>Dean of the School of Nursing</i>	Faculty Apartments
PAUL HIBBERT CLYDE, Ph.D.	
<i>Director of the Summer Session</i>	1311 Carolina Avenue
OLAN L. PETTY, Ph.D.	
<i>Assistant Director of the Summer Session</i>	2521 Shenandoah Avenue
CAZLYN GREEN BOOKHOUT, Ph.D.	
<i>Director of the Duke Marine Laboratory</i>	1307 Alabama Avenue

BUSINESS ADMINISTRATION

ALFRED SMITH BROWER, A.B.	
<i>Business Manager and Comptroller</i>	614 West Campus
CHARLES BLACKWELL MARKHAM, A.M.	
<i>Treasurer of the University</i>	204 Dillard Street
CHARLES EDWARD JORDAN, A.B., LL.D.	
<i>Secretary of the University</i>	813 Vickers Avenue
EDWIN CONSTANT BRYSON, LL.B.	
<i>University Attorney</i>	818 Anderson Street
GERHARD CHESTER HENRICKSEN, C.P.A.	
<i>Assistant Business Manager and Assistant Comptroller</i>	216 Forest Wood Drive
JOHN M. DOZIER, A.B.	
<i>Associate Secretary of the University</i>	2111 Ruffin Street
WILLIAM EDWARD WHITFORD, A.B.	
<i>Director of Operation and Maintenance</i>	146 Pinecrest Road
THEODORE WARREN MINAH, B.S. in H.M.	
<i>Director of Dining Hall Operations</i>	2117 Club Boulevard
MARY ROBINSON, B.A., B.S.	
<i>Manager, the Dining Halls, Woman's College</i>	Box 6085, College Station
*LAURA MARGUERITE DEYOE, B.S.	
<i>Manager, the Dining Halls, Men's Graduate Center</i>	2722 Brown Avenue
ELIZABETH MARGUERITE KAISER, B.A., M.S.	921 Lambeth Circle, Poplar Apartments
<i>Manager, the Dining Halls, Men's Graduate Center</i>	
JOHN ELLWOOD DOXEY, A.M.	
<i>Purchasing Agent</i>	1004 Broad Street
JESSE DAVID WELLONS, JR.	
<i>Manager of Stores Operations</i>	2703 Augusta Drive
WALTER GLEN COOPER, B.A.	
<i>Personnel Director</i>	1008 North Gregson Street

* Resigned, August 31, 1953.

WILLIAM KENNETH HOWARD, B.S. <i>Maintenance Engineer</i>	106 Pinecrest Road
HENRY FRANKLIN BOWERS, A.B. <i>Manager of Operations</i>	2505 Perkins Road
ERNEST LEE HAYWOOD, A.B. <i>Chief Accountant</i>	104 Hilton Avenue
*HARRY L. KELLER, C.P.A. <i>Supervisor, Budgets and Reports</i>	1 Carolee Apartments
KENNETH R. MANNING, A.B. <i>Supervisor, Tabulating Department</i>	Duke University Apartments
HENRY SPECK MORGAN, A.B. <i>Chief Clerk, Treasurer's Office</i>	409 Francis Street
†ROBERT BEVERIDGE FEARING <i>Adviser, Student Activities</i>	1803 Forest Road
CARL A. BOY <i>Superintendent of Utilities</i>	2214 Erwin Road
JOHN C. GIFT <i>Superintendent of Building Maintenance</i>	811 Fifth Street

PUBLIC RELATIONS

CHARLES EDWARD JORDAN, A.B., LL.D. <i>Vice-President in the Division of Public Relations</i>	813 Vickers Avenue
JOHN M. DOZIER, A.B. <i>Assistant to the Vice-President in the Division of Public Relations; Executive Secretary, University Scholarship Committee</i>	2111 Ruffin Street
EARL W. PORTER, A.B., B.J. <i>Director, Bureau of Public Information</i>	Randolph Road
GLENN EDWARD MANN, A.B. <i>Director, Office of Athletic Information</i>	Cole Mill Road
FANNIE YARBROUGH MITCHELL <i>Director, Appointments Office</i>	16 Alastair Court

ALUMNI AFFAIRS

CHARLES AUBREY DUKES, A.B. <i>Director</i>	1309 Oakland Avenue
ANNE GARRARD, A.M. <i>Assistant Director</i>	1411 North Duke Street
WILLIAM ALLEN TYREE, A.B. <i>Field Secretary, Duke University Loyalty Fund</i>	610 Buchanan Boulevard
CHARLOTTE CORBIN, A.B. <i>Assistant to the Director</i>	403 W. Chapel Hill Street
ROGER L. MARSHALL, A.B. <i>Editor, Alumni Register, and Assistant to the Director</i>	1829 Forest Road
FRED W. WHITENER, A.B. <i>Secretary of Local Associations</i>	Cornwallis Road
PATSY G. MCKAY, A.B. <i>Recorder</i>	Route 2, Roxboro Road
JAMES J. WHITLEY, JR. <i>University Photographer</i>	2509 Banner Street

* Resigned, January 31, 1953.

† Died, February 17, 1954.

Officers of Instruction

INSTRUCTIONAL STAFF

- PAUL MCB. ABERNETHY (1952), M.D.
Instructor in Ophthalmology Burlington, N. C.
- *ARTHUR F. ABT (1952), M.D.
*Professor of Pediatrics; Director of
Radioisotope Unit, Veterans Hospital* Duke Hospital
- FRANCES DOROTHY ACOMB (1945), Ph.D.
Assistant Professor of History 216 Faculty Apartments
- DONALD KEITH ADAMS (1931), Ph.D.
Professor of Psychology 2508 Cornwallis Road
- †EDWARD L. ADAMS, JR. (1951), Ph.D.
Instructor in Education Box 71B, Route 1, Old Chapel Hill Road
- JOHN PLETCH ADAMS (1952), M.D.
Instructor in Orthopaedic Surgery 1824 Forest Road
- TROGLER F. ADKINS (1938), M.D.
Instructor in Obstetrics and Gynecology 2108 Sprunt Street
- JOHN W. ALLGOOD (1951), M.D.
Instructor in Medicine Greensboro, N. C.
- ROBERT L. ALTER (1951), M.D.
Assistant Professor of Obstetrics and Gynecology 2027 Woodward Street
- EDWIN PASCAL ALYEA (1930), M.D.
Professor of Urology 3102 Devon Road, Hope Valley
- HARRIET AMEY (1953), A.B.
Instructor in Social Service 521 South Elm Street
- LEWIS EDWARD ANDERSON (1936), Ph.D.
Associate Professor of Botany 2020 Sunset Avenue
- ROGER FABIAN ANDERSON (1950), Ph.D.
Associate Professor of Forest Entomology 2528 Perkins Road
- WILLIAM BANKS ANDERSON (1930), M.D.
Professor of Ophthalmology 502 East Forest Hills Boulevard
- GEORGE R. ANDREWS (1953), M.A., M.D.
Instructor in Psychiatry 2122 Sunset Avenue
- WILLIAM G. ANLYAN (1951), M.D.
Assistant Professor of Surgery 2519 Pickett Road
- WILLIAM COUNCILL ARCHIE (1946), Ph.D.
Associate Professor of Romance Languages 2310 Cranford Road
- JAY MORRIS ARENA (1933), M.D.
Associate Professor of Pediatrics 2032 Club Boulevard
- MARGARET BERNARDINE AREY (1953), R.N., B.S.
Instructor in Pediatric Nursing 2201 Woodrow Street
- KIRO PETE ARGES (1953), M.S. in C.E.
Instructor in Civil Engineering 915 Lambeth Circle, Poplar Apartments
- RALPH ARANOVITZ ARNOLD (1946), M.D.
Associate Professor of Otolaryngology and Ophthalmology 415 Carolina Circle
- TANASHI H. ATOYNATAN (1952), P.C.N., M.D.
Instructor in Psychiatry 910 North Mangum

* Resigned, December 31, 1953.

† Resigned, August 31, 1953.

- THEODORE WINSLOW ATWOOD (1934), D.M.D.
Associate in Dentistry 9 Carolee Apartments, 2200 Elder Street
- HOWARD M. AUSHERMAN (1953), M.D.
Associate Professor of Anesthesiology Apartment 5, Erwin Road, Staff Quarters
- THOMAS MALCOLM AYCOCK (1937), M.A.
Professor of Physical Education DIC University Apartments
- * JOSEPH RANDLE BAILEY (1946), Ph.D.
Assistant Professor of Zoology Department of Zoology, Duke University
- LENEX DIAL BAKER (1947), M.D.
Professor of Orthopaedic Surgery 3106 Cornwall Road, Hope Valley
- ROGER D. BAKER (1930-1942; 1952), M.D.
Professor of Pathology 303 Swift Avenue
- MARIE BALDWIN (1949), M.D.
Associate in Psychiatry Duke Hospital
- KATHARINE MAY BANHAM (1946), Ph.D.
Associate Professor of Psychology 115 North Dillard Street
- EUGENE PENDLETON BANKS (1953), Ph.D.
Instructor in Sociology Randolph Road, Route 1
- SHERWOOD W. BAREFOOT (1946), M.D.
Instructor in Dermatology and Syphilology 363 North Elm Street
 Greensboro, N. C.
- JAMES FOSTER BARNES (1929), M.A.
Lecturer in Church Music 2401 Cranford Road
- † ROBERT D. BARNES (1952), B.S.
Instructor in Zoology University Apartments
- ROBERT HENRY BARNES (1953), M.D.
Associate in Psychiatry 1503 Alabama Street
- WOODROW BATTEN (1951), M.D.
Instructor in Medicine 332 South Third Street, Smithfield, N. C.
- PAULL FRANKLIN BAUM (1922), Ph.D.
James B. Duke Professor of English 112 Pinecrest Road
- WALTER PAUL BAUM (1953), Ph.D.
Visiting Instructor in German 409 Carver Street
- GEORGE JAY BAYLIN (1939), M.D.
Professor of Radiology and Associate in Anatomy 2260 Cranford Road
- CHARLES A. BAYLIS (1952), Ph.D.
Professor of Philosophy 601 East Markham Avenue
- WILLIAM WALDO BEACH (1946), B.D., Ph.D.
Professor of Christian Ethics 100 Vineyard Street
- MRS. DOROTHY WATERS BEARD (1938), R.N.
Research Associate in Surgery Route 3, Hillsboro, N. C.
- JOSEPH WILLIS BEARD (1937), M.D.
Professor of Surgery in Charge of Experimental Surgery; Associate Professor of Virology Route 3, Hillsboro, N. C.
- ROLAND FREDERICK BECKER (1951), Ph.D.
Associate Professor of Anatomy 1010 Monmouth Avenue
- WALTER R. BENSON (1952), M.D.
Instructor in Pathology 947 Lambeth Circle, Poplar Apartments

* Absent on sabbatical leave, 1953-54.

† Resigned, August 31, 1953.

- FREDERICK BERNHEIM (1930), Ph.D.
Professor of Pharmacology Woodridge Drive
- MRS. MARY LILIAS CHRISTIAN BERNHEIM (1930), Ph.D.
Associate Professor of Biochemistry Woodridge Drive
- MRS. LYDIA BERNSTEIN (1953), B.M., M.S.
Visiting Instructor in Music 103 North Street, Chapel Hill, N. C.
- EDWARD WILLARD BERRY (1936), Ph.D.
Professor of Geology 1003 North Gregson Street
- WILLIAM M. BERTON (1952), M.D.
Instructor in Pathology 887 Louise Circle, Poplar Apartments
- MRS. HELEN SMITH BEVINGTON (1943), M.A.
Assistant Professor of English Box 94, Route 2, Guess Road
- MERLE MOWBRAY BEVINGTON (1952), Ph.D.
Associate Professor of English Box 94, Route 2, Guess Road
- *LUCIUS AURELIUS BIGELOW (1929), Ph.D.
Professor of Chemistry 131 Pinecrest Road
- ROBERT R. BIGELOW (1952)
Visiting Lecturer in Surgery Duke Hospital
- WILLIAM DWIGHT BILLINGS (1952), Ph.D.
Associate Professor of Botany 708 Louise Circle, Poplar Apartments
- GEORGE BISHOPRIC (1953), M.D.
Instructor in Medicine Duke Hospital
- MARTIN LEE BLACK, JR. (1930), M.B.A., C.P.A.
Professor of Accounting 135 Pinecrest Road
- *WILLIAM MAXWELL BLACKBURN (1926), Ph.D.
Professor of English 2101 Ward Street
- EMIL BLAIR (1952), M.D.
Instructor in Medicine Elder Street
- ROBERT LINCOLN BLAKE (1949)
Associate in Medical Art and Illustration 609 Ruby Street
- ROBERT BLEKE (1953), Ph.D.
Lecturer in Psychology 1004 Carolina Avenue
- †MARTIN M. BLOCK (1952), Ph.D. 927 Lambeth Circle, Poplar Apartments
Assistant Professor of Physics and Research Associate
- HUGO LEANDER BLOMQUIST (1920), Ph.D.
Professor of Botany 922 Demerius Street
- BYRON M. BLOOR (1952), M.D.
Associate in Neurosurgery 2302 Erwin Road
- JAMES ROBERT BLY (1949), M.S.
Assistant Professor of Physical Education F2C University Apartments
- ‡BEATRICE BOERICKE (1953), B.A., P.T.
Instructor in Physical Therapy
- WILLIAM BRYAN BOLICH (1927), M.A., B.C.L.
Professor of Law 3724 Hope Valley Road, Hope Valley
- EDWARD CLAUDE BOLMEIER (1948), Ph.D.
Professor of Education 217 Faculty Apartments

* Absent on sabbatical leave, fall semester, 1953-54.

† Absent on leave, 1953-54.

‡ Resigned, October 31, 1953.

- ALLAN HADLEY BONE (1944), M.M.
Associate Professor of Music 2314 West Club Boulevard
- CAZLYN GREEN BOOKHOUT (1935), Ph.D.
Associate Professor of Zoology 1307 Alabama Avenue
- MRS. ELIZABETH CIRCLE BOOKHOUT (1932-43; 1945), M.S.
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- ALEXANDER W. BOONE (1952), M.D.
Assistant Professor of Urology 1106 Buchanan Boulevard
- LLOYD J. BORSTELMANN (1953), Ph.D.
Assistant Professor of Psychology Child Guidance Clinic
- MICHEL BOURGEOIS-GAVARDIN (1953), Docteur en Medecine
Visiting Lecturer in Anesthesiology 712 Underwood Avenue
- JOHN CHESLEY BOVIL (1952), M.D.
Instructor in Surgery 919 Broad Street
- ELBERT VICTOR BOWDEN (1952), M.A.
Instructor in Economics Chapel Hill Road
- * JEAN D. BOWEN (1952), Ph.D.
Instructor in Romance Languages 1009 West Trinity Avenue
- GILMORE BOWERS (1953), B.S. in E.E.
Instructor in Electrical Engineering 2305 Prince Street
- † W. EDGAR BOWERS, JR. (1952), Ph.D.
Instructor in English 2000 Arbor Street
- FRANCIS EZRA BOWMAN (1945), Ph.D.
Associate Professor of English 2114 Woodrow Street
- ‡ BENJAMIN BOYCE (1950), Ph.D.
Professor of English 1200 Dwire Place
- JOSEPH ALSTON BOYD, JR. (1952), M.D.
Assistant Professor of Radiology and Radiologist Hathaway Road
- DAVID GILBERT BRADLEY (1949), Ph.D.
Assistant Professor of Undergraduate Religion 707 Hudson Street
- HAROLD L. BRADLEY (1940), B.S.
Instructor in Physical Education 1903 Washington Street
- CHARLES KILGO BRADSHAW (1939), Ph.D.
Associate Professor of Chemistry 118 Pinecrest Road
- JOHN SAEGER BRADWAY (1931), A.M., LL.B.
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- RALPH J. D. BRAIBANTI (1953), Ph.D.
Associate Professor of Political Science Route 1, Durham, N. C.
- ROBERTA FLORENCE BRINKLEY (1947), Ph.D.
Professor of English East Campus
- § MRS. HELEN EELS BROCK (1952), B.E., R.N., B.S.
Instructor in Nursing Arts D3C University Apartments
- ROBERT MAURICE BRODERSON (1952), M.F.A.
*Instructor in Art Education and Studio, and
Instructor in Department of Education* 4 Duke University Apartments
Fifth and Markham Avenue
- ELMER L. BROOKS (1953), M.A.
Instructor in English 2101 Ward Street

* Resigned, August 31, 1953.

† Absent on leave, spring semester, 1953-54.

‡ Absent on leave, spring semester, 1952-53.

§ Resigned, November 30, 1953.

- * CHANDLER WILCOX BROWN (1947), B.S. in C.E.
Instructor in Civil Engineering Box 4, Route 1, Cornwallis Road
- MRS. DELORES G. BROWN (1953), B.A., M.S.W.
Instructor in Social Service 11-D Glen Lennox, Chapel Hill, N. C.
- FRANCES CAMPBELL BROWN (1931), Ph.D.
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- IVAN WILLARD BROWN, JR. (1940-42; 1945), M.D.
Assistant Professor of Surgery 2314 Woodrow Street
- WADE GILLIES BROWN (1947), A.B.
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 Lecturer in Sanitary Engineering* 1317 Arnette Avenue
- WILLIAM HUGH BROWNLIE (1948), Th.M., Ph.D.
Assistant Professor of Old Testament 2809 Fairview Road
- MARSHALL N. BRUCER (1950), M.D.
Lecturer in Physiology Duke Hospital
- PAUL ROBEY BRYAN, JR. (1951), M.M.
Assistant Professor of Music 1 Duke University Apartments
- EDWIN CONSTANT BRYSON (1931), LL.B.
*Associate Professor of Law, and
 Instructor in Hospital Administration* 818 Anderson Street
- ROGER CONANT BUCK (1953), B.A., B.Phil. (Oxon.)
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- LOUIS J. BUDD (1952), Ph.D.
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- MRS. JESSE HARNED BUFKIN (1949), R.N., R.R.L.
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- EVERETT I. BUGG, JR. (1953), M.D.
Associate in Orthopaedics 1544 Hermitage Court
- † ROGER MARK BUIE, JR. (1951), M.D.
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- EWALD W. BUSSE (1953), M.D.
*Professor of Psychiatry and Chairman of the
 Department of Psychiatry* 2204 Erwin Road
- JASPER LAMAR CALLAWAY (1937), M.D.
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- EDMUND McCULLOUGH CAMERON (1926), A.B.
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- FRANK H. CAMPBELL (1952), M.D.
Instructor in Medicine Duke Hospital
- MARY B. CAMPBELL (1952), R.N., B.S., M.A.A.N.A.
Instructor in Operating Room Technique Hanes House
- MARY MILTON CAMPBELL (1953), R.N., B.S. in N.Ed.
Instructor in Nursing Education 402 Buchanan Boulevard
- PAUL C. CAMPBELL, JR. (1951), M.D.
Instructor in Dermatology and Syphilology 327 Ray Avenue, Fayetteville, N. C.
- RUTH F. CAMPBELL (1952), M.A.
Instructor in Romance Languages 913 Green Street

* Resigned, January 31, 1954.

† Resigned, December 31, 1952.

- JAMES CANNON (1919), A.M., Th.M., D.D.
Ivey Professor of the History of Religion and Missions 2022 Myrtle Drive
- LEONARD CARLITZ (1932), Ph.D.
Professor of Mathematics 2303 Cranford Road
- DAVID WILLIAMS CARPENTER (1929), Ph.D.
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- JOHN WINDER CARR, JR. (1926), Ph.D.
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- EBER MALCOLM CARROLL (1923), Ph.D.
James B. Duke Professor of History K1C University Apartments
- R. CHARMAN CARROLL (1944), R.N., A.B., M.D.
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- BAYARD CARTER (1931), M.D.
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- DONALD D. CARTER (1952), M.D.
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- ALLAN MURRAY CARTTER (1952), Ph.D.
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- WILLIAM H. CARTWRIGHT (1951), Ph.D.
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- MRS. HELEN KENNARD CASTELLANO (1947), M.A.
Instructor in Romance Languages 2511 Perkins Road
- *JUAN RODRÍGUEZ CASTELLANO (1947), Doctor en Filosofía y Letras
Associate Professor of Romance Languages 2511 Perkins Road
- LEON EDWARD CHAIKEN (1952), B.S., M.F.
Associate Professor of Forest Management and Assistant Director of the Forest 912 Monmouth Avenue
- JOHN DAVID CHARLTON (1953), M.D.
Instructor in Medicine 936 Lambeth Circle, Poplar Apartments
- MRS. ROMA SAWYER CHEEK (1947), Ph.D.
Assistant Professor of Political Science 7 Cottage Lane, Chapel Hill, N. C.
- BENJAMIN GUY CHILDS (1924), M.A.
Professor of Education 1019 West Markham Avenue
- †MARGARET CHURCH (1946), Ph.D.
Instructor in English Route 2, Cole Mill Road
- ELON HENRY CLARK (1934)
Professor of Medical Art and Illustration 1300 Oakland Avenue
- KENNETH WILLIS CLARK (1931), Ph.D.
Professor of New Testament Language and Literature 1308 West Markham Avenue
- LELIA R. CLARK (1949), R.N., M.A.
Professor of Nursing Service Apartment 6M, Poplar Apartments
- ROBERT W. CLARK (1950), A.B., Captain, U. S. Air Force
Assistant Professor of Air Science 1109 North Gregson Street
- ROMANE LEWIS CLARK (1953), Ph.D.
Instructor in Philosophy Apartment 10, Fifth and Markham Avenue
- MAURICE H. CLARK (1953), B.S., Lieutenant Colonel, U. S. Marine Corps
Associate Professor of Naval Science 214 Swift Avenue

* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, August 31, 1953.

- *JAMES T. CLELAND (1945), M.A., S.T.M., D.D.
Professor of Homiletics, and Preacher to the University 2117 Myrtle Drive
- PAUL HIBBERT CLYDE (1937), Ph.D.
Professor of History 1311 Carolina Avenue
- CLARENCE H. COBB (1934), Ph.G.
Instructor in Hospital Administration 11 Beverly Drive
- LOUIS DAVID COHEN (1946), Ph.D.
Associate Professor of Psychology, and Assistant Professor of Clinical Psychology 913 Monmouth Avenue
- †THEODORE STANLEY COILE (1935), Ph.D.
Professor of Forest Soils Laurel Ridge Farm, Hillsboro Road
- ROBERT TAYLOR COLE (1935), Ph.D.
James B. Duke Professor of Political Science 7 Sylvan Road
- GEORGE H. COLLIER (1951), Ph.D.
Assistant Professor of Psychology 510 East Club Boulevard
- JOHN P. COLLINS (1948), M.D.
Associate Professor of Surgery 15 Alastair Apartments
- JOEL G. COLTON (1947), Ph.D.
Assistant Professor of History CIC University Apartments
- ROBERT MERLE COLVER (1953), Ed.D.
Assistant Professor of Education 1018 Buchanan Boulevard
- NORMAN FRANCIS CONANT (1935), Ph.D.
Professor of Mycology, and Associate Professor of Bacteriology Route 1, Old Cornwallis Road
- RICHARD GRIGSBY CONNAR (1950), M.D.
Assistant Professor of Surgery Alastair Apartments, 300 Swift Avenue
- ROBERT HOWE CONNERY (1949), Ph.D.
Professor of Political Science 906 Buchanan Boulevard
- ‡REBEKAH FRANCES CONRAD (1953), R.N., B.A., M.N.
Instructor in Nursing Arts 920 Second Street
- §EVELYN VAIL COONRAD (1952), M.D.
Instructor in Medicine 11D Westover Park Apartments
- RAPHAEL W. COONRAD (1952), M.D.
Instructor in Orthopaedic Surgery 11D Westover Park Apartments
- ALBERT DERWIN COOPER (1934), M.D.
Instructor in Medicine 1006 Dacian Avenue
- THOMAS HOWARD CORDLE (1950), Ph.D.
Assistant Professor of Romance Languages 2420 Perkins Road
- ALFRED NIXON COSTNER (1950), M.D.
Associate in Ophthalmology K3A University Apartments
- ROBERT CALVIN COX (1942), M.A.
Assistant Professor of Physical Education 1826 Guess Road
- ROBERT LAWRENCE CRAIG (1938), M.D.
Associate in Psychiatry Duke Hospital
- ROBERT NOWELL CREADICK (1946), M.D.
Associate Professor of Obstetrics and Gynecology 1200 Anderson Street
- MASON CRUM (1930), Ph.D., Litt.D.
Professor of Biblical Literature 912 Anderson Street

* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, January 31, 1954.

‡ Resigned, January 18, 1954.

§ Resigned, November 15, 1953.

- HORACE B. CUPP (1953), M.D.
*Assistant Professor of Hospital Administration,
 and Manager of the Veterans Hospital* Room D-1000, Veterans Hospital
- JOHN SHELTON CURTISS (1945), Ph.D.
Professor of History Route 2, Box 95, Guess Road
- ROBERT EARL CUSHMAN (1945), B.D., Ph.D.
Professor of Systematic Theology 130 Pinecrest Road
- W. KENNETH CUYLER (1938), Ph.D.
Research Instructor in Obstetrics Box 19, Route 1, Durham, N. C.
- BINGHAM DAI (1943), Ph.D.
*Professor of Psychology, and Professor of
 Medical Psychology* 2404 Perkins Road
- BOYD LEE DANIELS (1952), B.D.
Instructor in Undergraduate Religion 330 Clark Street
- WILLIAM DAVID DAVIES (1950), B.D., D.D.
Professor of Biblical Theology 810 Second Street
- CLARENCE D. DAVIS (1950), M.D.
Assistant Professor of Obstetrics and Gynecology 2301 West Club Boulevard
- COURTLAND HARWELL DAVIS, JR. (1950), M.D.
Instructor in Neurology 1803 Hillcrest Drive
- GIFFORD DAVIS (1930), Ph.D.
Professor of Romance Languages 2248 Cranford Road
- MRS. ATALA THAYER SCUDDER DAVISON (1942), M.D.
Associate in Pediatrics Fairways, Hope Valley
- WILBURT CORNELL DAVISON (1927), M.D., D.Sc., LL.D.
James B. Duke Professor of Pediatrics Fairways, Hope Valley
- HOWARD W. DAWSON (1953), B.S., Lieutenant Commander, U. S. Navy
Assistant Professor of Naval Science 909 Arnette Avenue
- ALEXANDER DECONDE (1952), Ph.D.
Assistant Professor of History 2513 Pickett Road
- JOHN ESSARY DEES (1939), M.D.
Professor of Urology 413 Carolina Circle
- MRS. SUSAN COONS DEES (1939), M.D.
Associate Professor of Pediatrics and Allergy 413 Carolina Circle
- *DAVID C. DELLINGER (1951), B.S.M.E., Captain, U. S. Air Force
Instructor in Air Science L3C University Apartments
- WILLIAM J. A. DEMARIA (1951), M.D.
Associate in Pediatrics 2721 Brown Avenue, Poplar Apartments
- JEAN-JACQUES DEMOREST (1948), Ph.D.
Assistant Professor of Romance Languages 2428 Perkins Road
- WILLIAM ERNEST DETURK (1949), M.D., Ph.D.
Assistant Professor of Pharmacology 1212 Ruffin Street
- FRANK TRAVER DEVYVER (1935), Ph.D.
Professor of Economics 8 Sylvan Road
- DONALD J. DEWEY (1950), M.A.
Assistant Professor of Economics 611 Watts Street
- MACDONALD DICK (1932), M.D.
*Assistant Professor of Physiology and Pharmacology,
 and Associate in Medicine* Norwich Way, Hope Valley

* Resigned, August 31, 1953.

- ROBERT L. DICKENS (1949), M.S., C.P.A.
Assistant Professor of Accounting 1506 Carolina Avenue
- RUSSELL LESLIE DICKS (1949), B.D., D.D., D.Litt.
*Associate Professor of Pastoral Care and
 Chaplain to Duke Hospital* 2308 Prince Street
- DANIEL LAFAYETTE DONOVAN (1953), M.D.
Instructor in Medicine 827 Louise Circle, Poplar Apartments
- MRS. MARIE-THERESE LINIERE DOW (1934), L. ès L., M.A.
Instructor in Romance Languages 2252 Cranford Road
- NEAL DOW (1934), Ph.D.
Associate Professor of Romance Languages 2252 Cranford Road
- ANTHONY CHARLES DRAGO (1953), B.S. in P.E.
Instructor in Physical Education 1318 Gregson Street
- FRANCIS GEORGE DRESSEL (1929), Ph.D.
Professor of Mathematics 309 Francis Street
- KENNETH LINDSAY DUKE (1940), Ph.D.
Associate Professor of Anatomy 701 West Club Boulevard
- *BRADFORD DUNHAM (1950), Ph.D.
Instructor in Philosophy 603 Watts Street
- †OSCAR DUQUE (1951), M.D.
Associate in Pathology 826 Louise Circle, Poplar Apartments
- ROBERT F. DURDEN (1952), Ph.D.
Instructor in History 2812 Erwin Road, Poplar Apartments
- GEORGE SHARP EADIE (1930), Ph.D.
Professor of Physiology and Pharmacology 3433 Dover Road, Hope Valley
- WATT WEEMS EAGLE (1930), Ph.D.
Professor of Otolaryngology 804 Anderson Street
- MRS. ELEANOR BEAMER EASLEY (1934), M.D.
Associate in Obstetrics and Gynecology Guess Road
- ‡HOWARD EASLEY (1930), Ph.D.
Associate Professor of Education Guess Road
- FREDERICK THOMAS EASTWOOD (1951), M.D.
Instructor in Pediatrics 1839 West Smallwood Drive, Raleigh, N. C.
- EDWARD ARTHUR ECKERT (1953), Ph.D.
Instructor in Bacteriology 1302 Lakewood Avenue
- RUTH BUCHANAN EDDY (1952), M.S.
Assistant Professor of Physical Education 213 Faculty Apartments
- §JOSHUA L. EDWARDS (1951), M.D.
Associate in Pathology 802 Louise Circle, Poplar Apartments
- FRANK NICHOLAS EGERTON (1945), A.M., E.E.
Assistant Professor of Electrical Engineering 411 North Gregson Street
- SAMUEL L. ELMON (1949), M.D.
Instructor in Medicine 225 Green Street, Fayetteville, N. C.
- WILLIAM WHITFIELD ELLIOTT (1925), Ph.D.
Professor of Mathematics Hillendale Road
- LEON HUBBARD ELLIS (1947), Ph.D.
Lecturer in Political Science 2428 Perkins Road

* Resigned, August 31, 1953.

† Resigned, July 31, 1953.

‡ Absent on sabbatical leave, 1953-54.

§ Resigned, June 30, 1953.

- ERNEST ELSEVIER (1950), M.S. in M.E.
Assistant Professor of Mechanical Engineering Route 1, Hillsboro, N. C.
- JOHN RICHARD EMLET (1952), M.D.
Associate in Surgery 2521 Pickett Road
- FRANK LIBMAN ENGEL (1947), M.D.
Associate Professor of Medicine and
Associate in Physiology 1302 Oakland Avenue
- JESSE HARRISON EPPERSON (1930), B.S.
Instructor in Preventive Medicine and Public Health 1601 Hermitage Court
- E. HARVEY ESTES (1953), M.D.
Instructor in Medicine 807 Louise Circle, Poplar Apartments
- *MARY ELLEN ESTILL (1949), Ph.D.
Instructor in Mathematics J3A University Apartments
- JOHN WENDELL EVERETT (1932), Ph.D.
Professor of Anatomy 2605 University Drive
- WILLIAM MARTIN FAIRBANK (1952), Ph.D.
Associate Professor of Physics 2016 Perishing Street
- CARMEN M. FALCONE (1946), M.A.
Assistant Professor of Physical Education University Apartments
- WILLIAM WINFREE FARLEY (1951), M.D.
Instructor in Pediatrics 817 Hillsboro Street, Raleigh, N. C.
- BLAKE FAWCETT (1952), M.D.
Instructor in Surgery 324 Monmouth Avenue
- JOHN MORTON FEIN (1950), Ph.D. 942 Lambeth Circle, Poplar Apartments
Assistant Professor of Romance Languages
- JAMES RONE FELTS, JR. (1949)
Instructor in Hospital Administration 700 Clement Avenue, Charlotte, N. C.
- ARTHUR BOWLES FERGUSON (1939), Ph.D.
Associate Professor of History Route 2, Guess Road
- GEORGE BURTON FERGUSON (1937), M.D.
Associate in Bronchoscopy 3938 Dover Road, Hope Valley
- BERNARD F. FETTER (1951), M.D.
Associate in Pathology 803 Demerius Street
- *ROBERT JAMES FILER (1951), Ph.D.
Assistant Professor of Psychology 915 Lambeth Circle, Poplar Apartments
- †EDGAR BEAUREGARDE FISHER (1953), B.D.
Lecturer in Practical Theology 2000 Cedar Street
- WALTER CLEVELAND FITZGERALD (1951), M.D.
Instructor in Dermatology and Syphilology 2 Chambers Street, Danville, Va.
- MRS. JULIA FLEMING (1949), R.N., B.S.
Instructor in Psychiatric Nursing Hanes House
- ENOLA SUE FLOWERS (1953), B.S. Apartment 7, Emile Apartments, Roxboro Road
Instructor in Physical Therapy
- MERLE FOECKLER (1953), A.B., M.S.
Instructor in Social Service 2728 Brown Avenue, Poplar Apartments
- ‡WILEY DAVIS FORBUS (1930), M.D.
Professor of Pathology 3309 Devon Road, Hope Valley

* Resigned, August 31, 1953.

† Spring semester, 1953-54.

‡ Absent on leave, July 15, 1953, to January 15, 1954.

- JOEL CLARENCE FORD, JR. (1953), B.S., Captain, U. S. Navy
Professor of Naval Science 2101 Myrtle Drive
- LESTER R. FORD, JR. (1953), Ph.B., S.M., Ph.D.
Research Instructor in Mathematics 9 Fifth and Markham Avenue
- JOHN ALVIS FOWLER (1953), M.D.
Assistant Professor of Psychiatry 1-20-A Glen Lennox Apartments,
 Chapel Hill, N. C.
- CARLYLE JAMES FRAREY (1952), M.S.
Assistant Librarian 819 Demerius Street
- RUSSELL A. FRASER (1952), Ph.D.
Instructor in English 908 Shepherd Street
- CHARLES DARBY FULTON, JR. (1950), Sc.D.
Assistant Professor of Mechanical Engineering 1507 Pettigrew Street
- CLARENCE ELLSWORTH GARDNER, JR. (1930), M.D., D.Sc.
Professor of Surgery 3106 Devon Road, Hope Valley
- WILLIAM HENRY GARDNER, JR. (1953), B.S. in C.E., M. Engg.
Assistant Professor of Civil Engineering 2108 Cole Road
- *ELIZABETH GARMAN (1952), R.N., B.S.
Instructor in Surgical Nursing Hanes House
- NORMAN GARMEZY (1950), Ph.D.
Assistant Professor of Psychology 3423 Hope Valley Road, Hope Valley
- NORMAN H. GARRETT, JR. (1953), M.D.
Instructor in Medicine 860 Louise Circle, Poplar Apartments
- OTTO H. GAUER (1953), M.D.
Associate Professor of Physiology and Pharmacology Route 1, Box 113, Durham, N. C.
- NICHOLAS G. GEORGAIDE (1951), D.D.S., M.D.
Associate in Oral Surgery 2417 Bruton Road
- JOHN JAY GERGEN (1936), Ph.D.
Professor of Mathematics 2803 Nation Avenue
- ALLAN H. GILBERT (1920), Ph.D.
Professor of English 530 Compton Place
- †STEPHEN ARNOLD GINN (1950), M.D.
Associate in Psychiatry 2517 Glendale Avenue
- ‡RENÉ GIRARD (1952), Ph.D.
Instructor in Romance Languages 1004 Carolina Avenue
- JOHN GLASSON (1952), M.D.
Instructor in Orthopaedics 615 Swift Avenue
- GEORGE G. GLOCKLER (1952), Ph.D.
Visiting Lecturer in Chemistry 3309 Avon Road, Hope Valley
- CLARENCE GOHDES (1930), Ph.D.
Professor of English 2614 Stuart Drive
- JOSEPH LEONARD GOLDNER (1950), M.D.
Assistant Professor of Orthopaedics 906 Demerius Street
- JEWETT GOLDSMITH (1949), M.D.
Associate in Psychiatry 918 Monmouth Avenue
- SANFORD GOLDSTONE (1953), Ph.D.
*Associate in Clinical Psychology in the
 Department of Psychiatry and Lecturer in
 the Department of Psychology* 894 Louise Circle, Poplar Apartments

* Resigned, May 11, 1953.

† Resigned, June 30, 1953.

‡ Resigned, August 31, 1953.

- WILLIAM LEWIS GORDON (1952), Ph.D.
Instructor in Mathematics 13 Fifth and Markham Avenue
- WALTER GORDY (1946), Ph.D.
Professor of Physics 2521 Perkins Road
- WILLIAM ALEXANDER GRAHAM (1938), M.D.
Instructor in Obstetrics and Gynecology 2247 Cranford Road
- RICHARD BABSON GRANT (1952), Ph.D.
Instructor in Romance Languages Apartment 4, 904 Second Street
- *LAWRENCE EUGENE GRAVES (1952), M.A.
Instructor in English 2206 Pike Street
- CYRUS L. GRAY (1952), M.D.
Instructor in Radiology 219 Boulevard Street, High Point, N. C.
- IRVING EMERY GRAY (1930), Ph.D.
Professor of Zoology 124 Pinecrest Road
- ROBERT HAROLD GREKIN (1952), M.D.
Instructor in Dermatology and Syphilology Box 154, Route 2, Roxboro Road
- EUGENE GREULING (1948), Ph.D.
Associate Professor of Physics 2414 Perkins Road
- KEITH SANFORD GRIMSON (1930-42; 1945), M.D.
Professor of Surgery 3313 Devon Road, Hope Valley
- PAUL MAGNUS GROSS (1919), Ph.D.
William Howell Pegram Professor of Chemistry 3816 Dover Road, Hope Valley
- JULIA REBECCA GROUT (1924), M.S.
Professor of Physical Education 804 Fourth Street
- CHARLES GROSHON GUNN, JR. (1953), M.D.
Instructor in Medicine 820 Louise Circle, Poplar Apartments
- NORMAN GUTTMAN (1951), Ph.D.
Assistant Professor of Psychology 854 Louise Circle, Poplar Apartments
- ROSE HAHOLA (1952)
Instructor in Pediatric Nursing 920 Second Street
- HOWARD N. HAINES (1943), B.S.
Visiting Assistant Professor of Civil Engineering 2307 Club Boulevard
- MURRAY HALFOND (1952), Ph.D.
Associate in Medical Speech Pathology 924 Lambeth Circle, Poplar Apartments
- FRANK GREGORY HALL (1926-42; 1945), Ph.D.
Professor of Physiology and Pharmacology 122 Pinecrest Road
- HUGH MARSHALL HALL (1952), Ph.D.
Instructor in Political Science 7 Duke University Apartments
- LOUISE HALL (1931), B.A., S.G. in Architecture, Brevet d'Art
Associate Professor of Architecture Box 6636, College Station
- †WILLIAM HOLLAND HALL (1915), A.M., M.S.C.E.
J. A. Jones Professor of Engineering 922 Urban Avenue
- JOHN HAMILTON HALLOWELL (1942), Ph.D.
Professor of Political Science 2709 Augusta Drive
- EDWIN CROWELL HAMBLÉN (1931), M.D.
*Associate Professor of Obstetrics and Gynecology,
and Professor of Endocrinology* 810 Forest Hills Boulevard

* Resigned, August 31, 1953.

† Absent on sabbatical leave, fall semester, 1953-54.

- *GEORGE WALTER HAMBRICK, JR. (1952), M.D.
Associate in Dermatology and Syphilology 8 Glenn Apartments
- WILLIAM BASKERVILLE HAMILTON, JR. (1936), Ph.D.
Professor of History 2256 Cranford Road
- LADD W. HAMRICK (1953), M.D.
Instructor in Medicine 703 Jackson Street
- PHILIP HANDLER (1939), Ph.D.
Professor of Biochemistry and Nutrition 2529 Perkins Road
- FRANK ALLAN HANNA (1948), Ph.D.
Professor of Economics 2239 Cranford Road
- OSCAR CARL EDVARD HANSEN-PRUSS (1930), M.D. 3303 Surrey Road, Hope Valley
Professor of Medicine in Charge of Clinical Microscopy
- †EARL THOMAS HANSON (1946), Ph.D.
Assistant Professor of Political Science 613 Swift Avenue
- ELLWOOD SCOTT HARRAR (1936), Ph.D.
Professor of Wood Technology 2228 Cranford Road
- ‡ROBERT BRENT HARRELL (1950), A.B., Commander, U. S. Navy
Associate Professor of Naval Science 1405 North Duke Street
- GEORGE PARKER HARRIS (1932), A.B.
Instructor in Hospital Administration 2156 Colony Road, Charlotte, N. C.
- JEROME SYLVAN HARRIS (1936), M.D.
Professor of Pediatrics, and
Associate Professor of Biochemistry 1007 Rosehill Avenue
- FRANCIS PARKS HARRISON (1947), M.A.
Assistant Professor of Physical Education 2511 Pickett Road
- HORNELL NORRIS HART (1938), Ph.D.
Professor of Sociology 2535 Perkins Road
- JULIAN DERYL HART (1930), M.D.
Professor of Surgery Route 1, Duke University Road
- †GEORGE CORBIN HARWELL (1935), Ph.D.
Assistant Professor of English 2115 Wilson Street
- CHARLES CLEVELAND HATLEY (1917), Ph.D.
Professor of Physics 708 Buchanan Boulevard
- ROGER K. HAUGEN (1953), M.D.
Instructor in Pathology Bowling Creek Road, Chapel Hill, N. C.
- CHARLES ROY HAUSER (1929), Ph.D.
Professor of Chemistry 1020 Rosehill Avenue
- CAROLINE ELIZABETH HELMICK (1949), M.D.
Associate in Preventive Medicine and Public Health, and
Director of Student Health, Woman's College East Campus
- JAMES PAISLEY HENDRIX (1938), M.D.
Associate Professor of Medicine and Therapeutics 144 Pinecrest Road
- §JOHN WILLIAM HENDRIX (1947), M.S.
Instructor in Physical Education 1019 Oakland Avenue
- STEPHEN DUNCAN HERON, JR. (1950), M.S.
Instructor in Geology Apartment 12, Duke University Apartments

* Resigned, December 31, 1952.

† Absent on sabbatical leave, spring semester, 1953-54.

‡ Resigned, April 17, 1953.

§ Resigned, August 31, 1953.

- *HOWARD EGBERT HERRING (1952), M.D.
Instructor in Medicine 2720 Brown Avenue, Poplar Apartments
- DUNCAN CHARTERIS HETHERINGTON (1930), Ph.D., M.D.
Professor of Anatomy K3B University Apartments
- ALBERT HEYMAN (1953), M.D.
Associate Professor of Medicine Duke Hospital
- JOSEPH S. HIATT (1953), M.D.
Instructor in Medicine Duke Hospital
- JOHN BAMBER HICKAM (1947), M.D.
Associate Professor of Medicine N2B University Apartments
- ARTHUR OWEN HICKSON (1929), Ph.D.
Assistant Professor of Mathematics 2712 Legion Avenue
- DOUGLAS GREENWOOD HILL (1931), Ph.D.
Professor of Chemistry Box 275, Route 2, St. Mary's Road
- †EDGAR LAFAYETTE HILLMAN (1951), B.D., D.D.
Visiting Lecturer in Practical Theology 1002 Knox Street
- MARCUS EDWIN HOBBS (1935), Ph.D.
Professor of Chemistry 115 Pinecrest Road
- LESLIE BENJAMIN HOHMAN (1946), M.D.
Professor of Psychiatry 616 Ruby Street
- ‡BERNARD CLEVELAND HOLLAND (1948), M.D.
Associate in Medicine 705 Louise Circle, Poplar Apartments
- RAY WALTER HOLLAND (1947), M.S. in M.E.
Assistant Professor of Mechanical Engineering 2528 Glendale Avenue
- IRVING BRINTON HOLLEY, JR. (1947), Ph.D.
Assistant Professor of History 6 Duke University Apartments
- CHARLES M. HOLMES (1953), M.A.
Instructor in English 911 Englewood Avenue
- FRANCES VIRGINIA LEE HOLTON (1947), M.A.
Assistant Professor of Physical Education 407 Erwin Apartments
- THOMAS RUFFIN HOOD (1952), M.D.
Instructor in Medicine Duke Hospital
- CALVIN BRYCE HOOVER (1925), Ph.D., Litt.D.
James B. Duke Professor of Economics 1702 Duke University Road
- EDWARD CHARLES HORN (1946), Ph.D.
Assistant Professor of Zoology 2509 Cascadilla Street
- §MRS. SARA PRIVATT HORNE (1953), R.N., B.S.N., B.S. in N.Ed.
Instructor in Medical Nursing 874 Louise Circle, Poplar Apartments
- STEPHEN FRANCIS HORNE (1950), M.D.
Instructor in Dermatology and Syphilology 380 South Main Street, Rocky Mount, N. C.
- AUBREY THOMAS HORNSBY (1953), M.D.
Assistant Professor of Radiology, and Chief of the Radiological Department, Veterans Hospital 420 Carolina Circle
- RAYMOND L. HOWARD (1953)
Instructor in Medical Photography 108 East Club Boulevard
- JAY BROADUS HUBBELL (1927), Ph.D., Litt.D.
Professor of English 121 Pinecrest Road

* November 1, 1952, to July 31, 1953.

† Fall semester, 1953-54.

‡ Absent on leave, August 1, 1953, to July 1, 1954.

§ Resigned, October 31, 1953.

- WAYLAND ELROY HULL (1953), Ph.D.
Assistant Professor of Physiology Apartment N-1, 819 Demerius Street
- DON DOUGAN HUMPHREY (1945), Ph.D.
Professor of Economics 2802 Legion Avenue
- *MRS. WANDA SANBORN HUNTER (1947). Ph.D.
Associate Professor of Zoology 800 Louise Circle, Poplar Apartments
- †THELMA INGLES (1949), R.N., M.A.
Assistant Professor of Nursing Education;
Director, Division of Nursing Education 854 Louise Circle, Poplar Apartments
- WILLIAM HENRY IRVING (1936), B.A. (Oxon.), Ph.D.
Professor of English 2707 Legion Avenue
- CHARLES EDWIN IRWIN (1946), M.D.
Lecturer in Orthopaedic Surgery Duke Hospital
- ANNE M. JACOBANSKY (1953), R.N., B.S. in N.Ed., M. Ed.
Assistant Professor of Nursing in Charge
of Nursing Education 854 Louise Circle, Poplar Apartments
- JULIAN E. JACOBS (1936-38; 1947), M.D.
Lecturer in Orthopaedics 819 Fourth Street
- MARIANNA DUNCAN JENKINS (1948), Ph.D.
Associate Professor of Art 1400 Oakland Avenue
- HOWARD EIKENBERRY JENSEN (1931), B.D., Ph.D.
Professor of Sociology 143 Pinecrest Road
- WALLACE NORUP JENSEN (1953), M.D.
Assistant Professor of Medicine L-26-D, Glen Lennox, Chapel Hill, N. C.
- FREDERICK CHARLES JOERG (1947), M.B.A.
Associate Professor of Economics 1400 Oakland Avenue
- ‡CHARLES E. JOHNSON (1952), M.A.
Instructor in English 1400 Duke University Road
- DAVID SPIRES JOHNSON (1953), M.D.
Instructor in Pathology Apartment 10-C, 2904 Erwin Road
- MRS. DOROTHY MERLYN JOHNSON (1953), B.S., M.S.W.
Instructor in Social Service 212 Faculty Apartments
- DAVID H. JOHNSTON (1953), M.D.
Instructor in Medicine 2707 Hillsboro Road
- ‡DOROTHY JOHNSTON (1952), R.N., B.S., C.P.H.N.
Assistant Professor of Nursing Education 107 Hanes House
- EDWARD ELLSWORTH JONES (1953), Ph.D.
Assistant Professor of Psychology and
Associate in Clinical Psychology in the
Department of Psychiatry 869 Louise Circle, Poplar Apartments
- ARCHIBALD CURRIE JORDAN (1925), M.A.
Assistant Professor of English 147 Pinecrest Road
- BRADY RIMBEY JORDAN (1927), Ph.D.
Professor of Romance Languages 117 Pinecrest Road
- HELEN LOUISE KAISER (1943), R.P.T.T.
Assistant Professor of Physical Rehabilitation 804 Fourth Street
- WILLIAM ARTHUR KALE (1952), B.D., D.D.
Professor of Practical Theology 1011 Dacian Avenue

* Absent on sabbatical leave, spring semester, 1953-54.

† Absent on leave, fall semester, 1953-54.

‡ Resigned, August 31, 1953.

- HARRY I. KALISH (1953), Ph.D.
Visiting Assistant Professor of Psychology 902 East Club Boulevard
- HENRY KAMIN (1948), Ph.D.
Associate in Biochemistry J3C University Apartments
- MICHAEL J. KEITH (1953), M.D.
Instructor in Psychiatry Highland Hospital, Asheville, N. C.
- WALTER KEMPNER (1934), M.D.
Professor of Medicine 1505 Virginia Avenue
- HAYWARD KENISTON (1952), Ph.D.
Visiting Lecturer in Romance Languages 214 Faculty Apartments
- *JAMES STEWART KENNEDY (1951), B.S., Lieutenant, U. S. Navy
Assistant Professor of Naval Science 1613 Dexter Street
- VAN LESLIE KENYON, JR. (1945), M.M.E.
Associate Professor of Mechanical Engineering Route 2, Hillsboro, N. C.
- †MRS. NANCY PEELER KEPPEL (1953), B.A.
Instructor in Physical Education Poplar Apartments
- GRACE PARDRIDGE KERBY (1947), M.D.
Assistant Professor of Medicine 707 Louise Circle, Poplar Apartments
- DWIGHT TALMADGE KERNODLE (1952), M.D.
Instructor in Medicine Route 1, Elon College, N. C.
- GEORGE WALLACE KERNODLE (1949), M.D.
Instructor in Pediatrics 305 West Front Street, Burlington, N. C.
- EILEEN DOROTHY KIERNAN (1952), R.N., B.S. in N.Ed.
Instructor in Nursing of Prematures 854 Louise Circle, Poplar Apartments
- GREGORY A. KIMBLE (1952), Ph.D.
Associate Professor of Psychology 1808 Hillcrest Drive
- JOHN TALBERT KING (1951), M.D.
Instructor in Pediatrics 306 West Davis Street, Burlington, N. C.
- EDWARD P. KINGSBURY (1952), M.D.
Instructor in Pediatrics 403 Jackson Street
- *VERNON KINROSS-WRIGHT (1949), B.M. (Oxon.), D.P.M.
Associate in Psychiatry; Director of Durham Child Guidance Clinic Box 79, Route 3, Durham, N. C.
- WILLIAM KLENZ (1947), M.A.
Assistant Professor of Music 15 Alastair Court
- ROBERT J. KNIGHT, JR. (1952), B.S., Colonel, U. S. Air Force
Professor of Air Science and Tactics 2107 Wilson Street
- LOIS NINA KNOWLES (1953), R.N., B.S. in Nursing
Instructor in Nursing Arts 2201 Woodrow Street
- RUTH M. KOCH (1953), M.S.
Assistant Professor and Counselor in the School of Nursing 224-226 Hanes House
- ‡SIGMUND KOCH (1942-47; 1948), Ph.D.
Professor of Psychology 2921 Horton Road
- SEYMOUR KORKES (1953), M.D.
Associate Professor of Biochemistry 3200 Guess Road
- CLARENCE FERDINAND KORSTIAN (1930), Ph.D.
Professor of Silviculture 4 Sylvan Road

* Resigned, August 31, 1953.

† Spring semester, 1953-54.

‡ Absent on leave, 1953-54.

- BARNET KOTTLER (1953), Ph.D.
Instructor in English 521 East Club Boulevard
- PAUL JACKSON KRAMER (1931), Ph.D.
Professor of Botany 2251 Cranford Road
- ROBERT KRAMER (1947), LL.B.
Professor of Law 108 Pinecrest Road
- EDWARD K. KRAYBILL (1939), M.S.E.
Assistant Professor of Electrical Engineering 900 Dacian Avenue
- WILLIAM R. KRIGBAUM (1952), Ph.D.
Assistant Professor of Chemistry 863 Louise Circle, Poplar Apartments
- SOPHIA LOUISE KROK (1953), R.N., M.S.
Instructor in Medical Nursing Apartment C, 2209 Elder Street
- ROBERT JOSEPH KUBISZEWSKI (1952), B.N.S., Lieutenant, U. S. Navy
Assistant Professor of Naval Science 814 Green Street
- GEORGE FREDERICK KUDER (1948), Ph.D.
Professor of Psychology 2516 Perkins Road
- EDWARD CHARLES KUNKLE (1948), M.D.
Associate Professor of Medicine in Charge of Neurology 2525 Perkins Road
- *WESTON LABARRE (1946), Ph.D.
Associate Professor of Anthropology 1311 Alabama Avenue
- CREIGHTON LACY (1953), B.D., Ph.D.
Assistant Professor of Missions and Social Ethics 2990 Wa Wa Avenue
- CHARLES EARL LANDON (1926), Ph.D.
Associate Professor of Economics 1514 Edgevale Road
- WILLIAM GUERRANT LANE (1952), Ph.D.
Instructor in English 1019 Dacian Avenue
- JOHN TATE LANNING (1927), Ph.D.
Professor of History 3007 Surrey Road, Hope Valley
- JOHN E. LARSH, JR. (1943), Sc.D.
Associate in Parasitology Duke Hospital
- *ELVIN REMUS LATTY (1937), J.D., J. Sc.D.
Professor of Law 3620 Hathaway Road, Hope Valley
- DUNBAR LAWSON (1953), B.S., Lieutenant Commander, U. S. Navy
Assistant Professor of Naval Science 1012 Arnette Avenue
- CLARENCE WILLIAM LEGERTON, JR. (1951), M.D.
Instructor in Medicine 713 Anderson Street
- BENJAMIN FRANKLIN LEMERT (1930), Ph.D.
Associate Professor of Economics 123 Pinecrest Road
- HAROLD WALTER LEWIS (1949), Ph.D.
Assistant Professor of Physics 2307 Sprunt Street
- MARTHA MODENA LEWIS (1933), M.A.
Associate Professor of Physical Education 407 Erwin Apartments
- RALPH ELTON LEWIS (1941), M.S. in M.E.
Assistant Professor of General Engineering 1401 Alabama Avenue
- ROSALYN LIGHTSEY (1953), A.B., M.S.W.
Instructor in Social Service 912 Lambeth Circle, Poplar Apartments
- CHARLES HARRIS LIVENGOOD, JR. (1946), LL.B.
Professor of Law 2804 Chelsea Circle, Hope Valley

* Absent on sabbatical leave, spring semester, 1953-54.

- GEORGE TOWNSEND LODGE (1953), Ph.D.
Associate Professor of Psychology 804 Third Street
- ARTHUR HILL LONDON, JR. (1932), M.D.
Associate in Pediatrics 306 South Gregson Street
- FREDERICK LONDON (1938), Ph.D., D. ès Sc.
James B. Duke Professor of Chemical Physics 1508 Oakland Avenue
- HANS LÖWENBACH (1940), M.D.
Professor of Psychiatry and Physiology Box 79, Route 3, Durham, N. C.
- CHARLES LUCIEN BAKER LOWNDES (1934), S.J.D.
James B. Duke Professor of Law 2016 Club Boulevard
- *AMANDA LUEDECKE (1952), R.N., B.S. in N.Ed.
Instructor in Psychiatric Nursing Duke Hospital
- OSKAR HELGE LUNDHOLM (1930), Ph.D.
Professor of Psychology 803 Second Street
- EMMETT S. LUPTON (1952), M.D.
Instructor in Dermatology and Syphilology 102 Taisley, Greensboro, N. C.
- GEORGE C. LYNCH (1953)
Instructor in Medical Art 1602 Albany Street
- JOSEPH HOWARD McALISTER (1953), M.D.
Associate in Radiology 2759½ Gness Road
- ANGUS M. MCBRYDE (1931), M.D.
Associate Professor of Pediatrics 410 East Forest Hills Boulevard
- JOHN MALCOLM MCBRYDE, JR. (1953), B.S.
*Administrative Assistant in Charge of the
Duke Hospital Out-Patient Clinic* 1309 Washington Street
- JOHN P. MCBRYDE (1950), M.A., Lieutenant Colonel, U. S. Air Force
Associate Professor of Air Science 2524 State Street
- JOSEPH ADOLPHUS McCLAIN, JR. (1940), J.S.D., LL.D.
Professor of Law 2021 Myrtle Drive
- JOSEPH P. MCCrackEN (1946), M.D.
Instructor in Medicine 126 Pinecrest Road
- †FOREST DRAPER McCREA (1930), Ph.D.
Associate Professor of Physiology and Pharmacology 1023 Demerius Street
- MALCOM McDERMOTT (1930), LL.B.
Professor of Law Route 2, Linden Road
- GELOLO McHUGH (1946), Ph.D.
Assistant Professor of Psychology 1413 Watts Street
- LIONEL WILFRED MCKENZIE, JR. (1948), B.Litt. (Oxon.), M.A.
Assistant Professor of Economics 15 Alastair Court, 300 Swift Avenue
- JONATHAN COLLINS McLENDON (1952), Ph.D.
Assistant Professor of Education 937 Lambeth Circle, Poplar Apartments
- LEWIS J. McNURLEN (1952), M.A.
Instructor in Sociology 1818 Glendale Avenue
- ‡SAMUEL D. McPHERSON, JR. (1949), M.D.
Associate in Ophthalmology 1520 Hermitage Court
- IAN O. MACCONOCHIE (1953), B.S. in M.E.
Instructor in Mechanical Engineering 1400 Alabama Avenue

* Resigned, July 31, 1953.

† Absent on leave, September 1, 1953, to January 1, 1954; resigned, January 1, 1954.

‡ Absent on leave, 1953-54.

- DOUGLAS BLOUNT MAGGS (1930), J.D., S.J.D.
Professor of Law 3940 Dover Road, Hope Valley
- *JOHN MCCLELLAN MAJOR (1953), M.A.
Visiting Instructor in English Department of English, Duke University
- ALAN KREBS MANCHESTER (1929), Ph.D.
Professor of History 2016 Myrtle Drive
- PAUL FRANKLIN MANESS (1949), M.D.
Instructor in Pediatrics 305 North Front Street, Burlington, N. C.
- JETHRO OATES MANLY (1952), B.S.
Instructor in Botany 907 Lambeth Circle, Poplar Apartments
- EVERETT JAMES MANN (1950), M.B.A., C.P.A.
Associate Professor of Accounting 1712 Roxboro Road
- GEORGE MARGOLIS (1947), M.D.
Associate Professor of Pathology 2417 Perkins Road
- JOSEPH ELDRIDGE MARKEE (1943), Ph.D.
James B. Duke Professor of Anatomy 1015 Demerius Street
- SIDNEY DAVID MARKMAN (1947), Ph.D.
Associate Professor of Art History and Archaeology 919 Urban Avenue
- MRS. ELSIE W. MARTIN (1930), M.S.
Professor of Dietetics 206 Faculty Apartments
- MRS. RUTH CAMPBELL MARTIN (1944), M.D.
Associate Professor of Anesthesiology and Assistant Anesthetist 113 Pinecrest Road
- SAMUEL PRESTON MARTIN (1949), M.D.
Associate Professor of Medicine and Assistant Professor of Bacteriology 113 Pinecrest Road
- MRS. JAY DAVIS MASSEY (1952), B.S., M.A.
Instructor in Physical Education 1609 Dexter Street
- LUCY ETHELYN MASSEY (1949), R.N., M.A.
Assistant Professor of Public Health Nursing Dawson Road, Chapel Hill, N. C.
- FRANCIS WYNNE MASTERS (1952), M.D.
Associate in Plastic Surgery 2305 Elder Street
- WILLIAM CARY MAXWELL (1930), Ph.D.
Associate Professor of German 142 Pinecrest Road
- OITO MEIER, JR. (1934), M.S., E.E.
Associate Professor of Electrical Engineering 916 Monmouth Avenue
- ELIJAH EUGENE MENESEE, JR. (1940), M.D.
Associate Professor of Medicine 2205 Cranford Road
- MRS. ANN REID MERZBACHER (1952), A.B.
Instructor in Mathematics Box 801, Chapel Hill, N. C.
- JAMES T. METZGER (1952), M.D.
Associate in Plastic and Oral Surgery 814 Watts Street
- M. VICTOR MICHALAK (1950), A.M.
Instructor in English 838 Louise Circle, Poplar Apartments
- OSCAR LEE MILLER (1946), M.D.
Lecturer in Orthopaedic Surgery Charlotte, N. C.
- FRANK KIRBY MITCHELL (1926), A.M.
Associate Professor of English 619 Swift Avenue
- †IRVING WARD MOHR (1952), D.D.S.
Instructor in Oral Surgery Duke Hospital

* Spring semester, 1953-54.

† Resigned, December 31, 1953.

- *WILFRIED F. H. M. Mommaerts (1948), Ph.D.
Lecturer in Biochemistry 854 Louise Circle, Poplar Apartments
- ROBERT JOHN MONTFORT (1940), B.A.
Associate Professor of Physical Education 3300 Cole Mill Road
- LOUISE G. MOSER (1949), R.N., M.N.
*Assistant Professor in Nursing Education and Director,
 Program in Advanced Psychiatric Nursing* 1004 West Markham Avenue
- EARL GEORGE MUELLER (1945), B.M., M.A., M.F.A.
Assistant Professor of Art 1212 Virginia Avenue
- MRS. JULIA WILKINSON MUELLER (1939-41; 1946), M.A.
Assistant Professor of Music 1212 Virginia Avenue
- WILLIAM MULDER (1953), M.A.
Visiting Instructor in English 1001 Lamond Avenue
- MARY FRANCES MULDROW (1952), Ph.D.
Instructor in Romance Languages 1507 West Pettigrew Street
- JOHN CRAWFORD MULLER (1953), M.D.
Instructor in Medicine Route 1, Box 5, Cornwallis Road
- ROBERT J. MURPHY, JR. (1950), M.D.
Associate in Pediatrics Chapel Hill, N. C.
- HIRAM EARL MYERS (1926), S.T.M., D.D.
Professor of Biblical Literature 141 Pinecrest Road
- JACK DUANE MYERS (1947), M.D.
Associate Professor of Medicine 713 Anderson Street
- JAMES B. MYERS (1952), A.B., Major, U. S. Air Force
Instructor in Air Science 214 Northwood Circle
- MRS. JESSICA H. LEWIS MYERS (1950), M.D.
Associate in Medicine 713 Anderson Street
- GEORGE W. NACE (1951), Ph.D.
Assistant Professor of Zoology 2402 Chapel Hill Road
- HELEN NAHM (1946), R.N., M.S., Ph.D.
*Professor of Nursing Education, and
 Director, Division Nursing Education* Faculty Apartments
- AUBREY WILLARD NAYLOR (1952), Ph.D.
Associate Professor of Botany 881 Louise Circle, Poplar Apartments
- †GLENN ROBERT NEGLEY (1946), Ph.D.
Professor of Philosophy 1700 Shawnee Street
- ERNEST WILLIAM NELSON (1926), Ph.D.
Associate Professor of History 939 Lambeth Circle, Poplar Apartments
- BARBARA CAROL NEWBORG (1952), M.D.
Instructor in Medicine 1503 Virginia Avenue
- HENRY WINSTON NEWSON (1948), Ph.D.
Professor of Physics 1111 North Gregson Street
- WILLIAM MCNEAL NICHOLSON (1935), M.D.
*Professor of Medicine in Charge of Postgraduate
 Education, and Disease of Metabolism* 824 Anderson Street
- WALTER MCKINLEY NIELSEN (1925), Ph.D.
James B. Duke Professor of Physics 139 Pinecrest Road

* Resigned, June 30, 1953.

† Absent on sabbatical leave, 1953-54.

- LOTHAR WOLFGANG NORDHEIM (1937), Ph.D., Sc.D.
Professor of Physics 2255 Cranford Road
- WILLIAM K. NOWILL (1951), M.D.
Assistant Professor of Anesthesiology 2604 Glendale Avenue
- *JOHN M. OCKER (1951), B.S., Captain, U. S. Navy
Professor of Naval Science 2101 Myrtle Drive
- GUY LEARY ODOM (1943), M.D.
Professor of Neurosurgery 2812 Chelsea Circle, Hope Valley
- FRANK ROLAND OLSON (1953), M.A.
Instructor in Mathematics 907 Second Street
- JOHN BURWELL OLIVER (1952), A.M.
Instructor in History 104 Faculty Apartments
- HENRY JOHN OOSTING (1932), Ph.D.
Professor of Botany 2642 University Drive
- EDWARD STEWART ORGAIN (1934), M.D.
Professor of Medicine 3321 Devon Road, Hope Valley
- RODERICK ORMANDY (1953), M.A.
Assistant Professor of Speech Pathology 2906 Erwin Road
- SUYDAM OSTERHOUT (1953), M.D.
Instructor in Bacteriology 03 Baker House
- †DEWEY A. OSTROM (1951), B.A., Lieutenant Commander, U. S. Navy
Assistant Professor of Naval Science and Tactics 2507 Shenandoah Avenue
- HARRY ASIITON OWEN (1951), B.E.E., M.S.E.
Assistant Professor of Electrical Engineering Hillandale Road
- AUBREY EDWIN PALMER (1944), B.S. in E., C.E.
Associate Professor of Civil Engineering 2519 State Street
- LEONARD PALUMBO (1950), M.D.
Associate in Obstetrics and Gynecology 1116 Ninth Street
- ‡HAROLD TALBOT PARKER (1939), Ph.D.
Associate Professor of History 12 Glenn Apartments, Dacian Avenue
- JOSEPH B. PARKER, JR. (1953), M.D.
*Associate Professor of Psychiatry, and
Chief of Psychiatry at Veterans Hospital* 2921 Horton Road
- §WILLIAM THOMAS PARROTT, JR. (1951), M.D.
Instructor in Medicine 109 East Gordon Street, Kinston, N. C.
- KARL BACHMAN PATTERSON (1920), A.M.
Assistant Professor of Mathematics 1024 Monmouth Avenue
- RANDOLPH E. PATTERSON (1953), B.S., Lieutenant (j.g.), U. S. Navy
Assistant Professor of Naval Science 2328 Farthing Street
- ROBERT LEET PATTERSON (1945), B.D., Ph.D.
Professor of Philosophy Washington Duke Hotel
- **LEWIS PATTON (1926), Ph.D.
Associate Professor of English 614 Swift Avenue
- WILLIAM BERNARD PEACH (1951), Ph.D.
Assistant Professor of Philosophy 2525 Chapel Hill Road
- RICHARD LEHMER PEARSE (1938), M.D.
Instructor in Obstetrics and Gynecology 1325 Arnette Avenue

* Resigned, June 15, 1953.

† Resigned, May 31, 1953.

‡ Absent on sabbatical leave, 1953-54.

§ Resigned, September 30, 1953.

** Absent on sabbatical leave, spring semester, 1953-54.

- TALMADGE LEE PEELE (1939), M.D.
Associate Professor of Anatomy, and
Assistant Professor of Medicine E2B University Apartments
- CHARLES HENRY PEETE, JR. (1953), M.D.
Associate in Obstetrics and Gynecology Duke Hospital
- MARION ISABEL PELTON (1953), A.B., M.S.
Instructor in Social Service 2113 Englewood Avenue
- KENNETH E. PENROD (1950), Ph.D.
Associate Professor of Physiology and Pharmacology, and
Assistant to the Dean of the School of Medicine 1815 Hillcrest Drive
- EDMUND FRANKLIN PERRY (1950), Ph.D. 7 Alastair Apartments, 300 Swift Avenue
Assistant Professor of Undergraduate Religion
- HAROLD SANFORD PERRY (1932), Ph.D.
Associate Professor of Botany 2302 Cranford Road
- SOLOMON PAUL PERRY (1953), M.D.
Assistant Professor of Radiology 1212 Arnette Avenue
- ELBERT LAPSLEY PERSONS (1930), M.D.
Associate Professor of Medicine, and Associate Professor
of Preventive Medicine and Public Health 723 Anderson Street
- WALTER SCOTT PERSONS (1930), A.B.
Assistant Professor of Physical Education 612 Swift Avenue
- ERNEST PESCHEL (1953), M.D.
Associate in Medicine 2306 Pershing Street
- RUTH LOHMANN PESCHEL (1951), M.D.
Associate in Medicine 2306 Pershing Street
- *RAY C. PETRY (1937), Ph.D., LL.D.
Professor of Church History 128 Pinecrest Road
- CLINTON M. PETTY (1953), Ph.D.
Research Instructor in Mathematics J3A University Apartments
- OLAN LEE PETTY (1952), Ph.D.
Assistant Professor of Education 2521 Shenandoah Avenue
- JOHN BERNARD PFEIFFER, JR. (1949), M.D.
Assistant Professor of Medicine N3B University Apartments
- JAMES HENRY PHILLIPS (1946), Ph.D.
Associate Professor of Biblical Literature 2517 Perkins Road
- JANE PHILPOTT (1951), Ph.D.
Assistant Professor of Botany 804 Fourth Street
- MARSHALL IVEY PICKENS (1932), M.A.
Lecturer in Hospital Administration 2000 Beverly Drive, Charlotte, N. C.
- HENRY FLOYD PICKETT (1935), A.B.
Associate in Medical Art and Illustration, and Photographer 2506 Cornwallis Road
- KENNETH LEROY PICKRELL (1944), M.D.
Professor of Plastic Surgery 3 Sylvan Road
- ROBERT FRANCIS PIERRE (1953), B.S. in C.E.
Instructor in Civil Engineering Route 1, Cornwallis Road
- VICTOR A. POLITANO (1952), M.D.
Instructor in Urology 500 East Markham Avenue
- HILDA PERSONS POPE (1948), Ph.D.
Assistant Professor of Bacteriology 802 Louise Circle, Poplar Apartments

* Absent on sabbatical leave, spring semester, 1953-54.

- *FRANCIS ROSS PORTER (1930), B.S.
Superintendent of the Hospital and Professor of Hospital Administration Hillsboro, N. C.
- DOROTHY OVERTON POST (1953), M.S. in S.W.
Instructor in Social Service 917 Green Street
- MARY ALVERTA POSTON (1930), A.M.
Associate in Bacteriology 512 Watts Street
- MARY POTEAT (1935), Ph.D.
Assistant Professor of English 103 Faculty Apartments
- BENJAMIN E. POWELL (1946), Ph.D. 3609 Hatlaway Road, Hope Valley
Professor in the Faculty of Arts and Sciences
- CLIFFORD PORTER POWELL (1953), M.D.
Instructor in Medicine 2411 Pickett Road
- †LEON W. POWELL, JR. (1952), M.D.
Instructor in Pathology East Club Boulevard
- CHARLES E. PRALL (1949), Ph.D. 1001 Hill Street, Greensboro, N. C.
Visiting Lecturer in Hospital Administration
- LANIER WARD PRATT (1940), M.A.
Instructor in Romance Languages 2007 Ruffin Street
- RICHARD LIONEL PREDMORE (1950), D.M.L.
Professor of Romance Languages 2413 Perkins Road
- JAMES L. PRICE, JR. (1952), Ph.D.
Assistant Professor of Undergraduate Religion 915 Arnette Avenue
- WILLIAM WATKINS PRYOR (1953), M.D.
Instructor in Medicine 2419 State Street
- ALBERT ELSWORTH PUGH (1953), M.D.
Assistant Professor of Medicine and Chief, Professional Services, Veterans Hospital Staff Quarters, Veterans Hospital
- JAMES MINETREE PYNE (1949), B.S.
Assistant Professor of Hospital Administration and Assistant Superintendent of the Hospital 1832 Forest Road
- ‡DAVID RABIN (1953), B.S. in M.E., I.L.B., I.L.M. (PAT.)
Instructor in Mechanical Engineering College of Engineering, Duke University
- §GEORGE JUSTICE RACE (1951), M.D.
Associate in Pathology 809 Louise Circle, Poplar Apartments
- CHARLES WILLIAM RALSTON (1953), B.S., M.F., Ph.D.
Assistant Professor of Forest Soils School of Forestry, Duke University
- RICHARD BEVERLY RANEY (1934), M.D.
Lecturer in Orthopaedic Surgery 1110 Shepherd Street
- ROBERT STANLEY RANKIN (1927), Ph.D.
Professor of Political Science 1107 Knox Street
- WATSON SMITH RANKIN (1952), M.D., D.Sc.
Visiting Lecturer in Hospital Administration 2049 Briarwood Road, Charlotte, N. C.
- EDWARD SHORE RAPER (1934), A.B.
Instructor in Hospital Administration 2317 Club Boulevard
- JOSEPHINE RAPPAPORT (1952), R.N., M.A.
Assistant Professor of Nursing Education Hanes House

* Absent on leave, October 1, 1952, to October 1, 1954.

† Resigned, June 30, 1953.

‡ Spring semester, 1953-54.

§ Resigned, June 30, 1953.

- CHARLES LEWIS RAST, JR. (1952), M.D.
Instructor in Medicine Route 1, Box 5, Cornwallis Road
- BENJAMIN ULYSSES RATCHFORD (1928), Ph.D.
Professor of Economics 133 Pinecrest Road
- ALBERT E. RAUH (1949), M.D.
Associate in Neurology Roanoke, Va.
- BENJAMIN SMITH READ (1952), B.A., Major, U. S. Marine Corps
Assistant Professor of Naval Science 1023 Lakewood Avenue
- ISRAEL THOMAS REAMER (1931), Ph.G.
Associate in Pharmacy 2406 West Club Boulevard
- MRS. JEANETTE REARDON (1953), A.B., M.S.W.
Instructor in Social Service 320 Clark Street
- KENNETH JAMES REARDON (1947), A.M.
Associate Professor of English 2610 Duke Homestead Road
- PETER RECHNITZER (1953), M.D.
Instructor in Medicine Duke Hospital
- FREDERICK JEROME REED (1935), M.E., M.S.
Associate Professor of Mechanical Engineering 2203 Englewood Avenue
- ROBERT JAMES REEVES (1930), M.D.
Professor of Radiology 920 Anderson Street
- EDWIN KELSEY REGEN (1951), B.D., D.D.
Visiting Lecturer in Practical Theology 1106 Watts Street
- HUGO MANLEY REICHARD (1951), Ph.D.
Instructor in English 2 Duke University Apartments
- *MRS. WALLY REICHENBERG-HACKETT (1946), Ph.D.
Assistant Professor of Psychology Route 1, Erwin Road
- FREDERICK P. RENKEN (1950), B. ARCH., MAJOR, U. S. Air Force
Assistant Professor of Air Science 2523 State Street
- THOMAS D. REYNOLDS (1953), Ph.D.
Assistant Professor of Education Apartment M4, 815 Demerius Street
- JOSEPH BANKS RHINE (1927), Ph.D.
Director of Parapsychology Laboratory Hillsboro, N. C.
- †BARBARA JANE RIEBEL (1951), M.S.
Instructor in Physical Education 806 West Club Boulevard
- HENRY STOUTTE ROBERTS, JR. (1948), Ph.D.
Associate Professor of Zoology Box 221, Route 5, Duke Homestead Road
- JOHN HENDERSON ROBERTS (1931), Ph.D.
Professor of Mathematics 2813 Legion Avenue
- WILLIAM M. ROBERTS (1950), M.D.
Lecturer in Orthopaedics Gastonia, N. C.
- ELIOT H. RODNICK (1949), Ph.D.
Professor of Psychology, and Director of Clinical Training in Psychology 2806 Legion Avenue
- E. STANFIELD ROGERS (1952), M.D.
Assistant Professor of Pathology 602 Ruby Street
- ROBERT SAMUEL ROGERS (1937), Ph.D., F.A.A.R.
Professor of Latin 148 Pinecrest Road

* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, January 31, 1954.

- *THEODORE ROPP (1938), Ph.D.
Associate Professor of History 302 Woodridge Drive
- JESSE LEE ROSE (1936), Ph.D.
Associate Professor of Latin and Greek East Campus
- NORMAN F. ROSS (1937), D.D.S.
Associate in Dentistry Chelsea Circle, Hope Valley
- ROBERT ALEXANDER ROSS (1930), M.D.
Lecturer in Obstetrics and Gynecology 818 Anderson Street
- DONALD FRANCIS ROY (1950), Ph.D.
Assistant Professor of Sociology 904 Shepherd Street
- MARVIN PIERCE RUCKER (1941), M.D., LL.D.
Lecturer in Obstetrics and Gynecology Richmond, Va.
- JOHN JESSE RUDIN, II (1945), Ph.D.
Associate Professor of Speech 1019 Rosehill Avenue
- MABEL F. RUDISILL (1948), Ph.D.
Associate Professor of Education 213 West Markham Avenue
- JULIAN MEADE RUFFIN (1930), M.D.
Professor of Medicine 816 Anderson Street
- RALPH WAYNE RUNDLES (1945), Ph.D., M.D.
Associate Professor of Medicine 132 Pinecrest Road
- REAMES HAWTHORNE SALES (1949), B.D., Ph.D.
Assistant Professor of Undergraduate Religion 2800 University Drive
- MURIEL I. SANDEEN (1950), Ph.D.
Instructor in Zoology 806 West Club Boulevard
- CHARLES RICHARD SANDERS (1947), Ph.D.
Professor of English 103 Pinecrest Road
- MRS. EUGENIA CURTIS SAVILLE (1947), M.A.
Assistant Professor of Music 1103 Anderson Street
- LLOYD BLACKSTONE SAVILLE (1946), Ph.D.
Associate Professor of Economics 1103 Anderson Street
- JOHN HENRY SAYLOR (1928), Ph.D.
Professor of Chemistry 707 West Club Boulevard
- THOMAS ANTON SCHAFER (1950), B.D., Ph.D.
Assistant Professor of Historical Theology 903 West Proctor Street
- *CLARENCE HENRY SCHETTLER (1946), Ph.D.
Associate Professor of Sociology 119 Pinecrest Road
- HERMAN MAX SCHIEBEL (1939), M.D.
Associate in Surgery 1020 Anderson Street
- †KNUT SCHMIDT-NIELSEN (1952), Mag.Sc., Ph.D.
Professor of Zoology 2402 Chapel Hill Road
- PHYLISS JEAN SCHOCK (1953) 912 Lambeth Circle, Poplar Apartments
Technical Instructor in Clinical Microscopy
- FRANCIS XAVIER SCHUMACHER (1937), B.S.
Professor of Forestry 6 Sylvan Road
- RUDOLPH MATTHIAS SCHUSTER (1953), Ph.D.
Research Associate and Visiting Assistant Professor of Botany 1427 Broad Street

* Absent on sabbatical leave, fall semester, 1953-54.

† Absent on leave, 1953-54.

- THEODORE B. SCHWARTZ (1948), M.D.
Assistant Professor of Medicine 854 Louise Circle, Poplar Apartments
- ESTHER LOUISE SCHWERMANN (1947), Ph.D.
Assistant Professor of English 909 Lambeth Circle, Poplar Apartments
- GEORGE WILLIAM SCHWERT, JR. (1946), Ph.D.
Associate Professor of Biochemistry 611 Hammond Street
- WILL CAMP SEALY (1946), M.D.
Associate Professor in Charge of Thoracic Surgery Division 2232 Cranford Road
- WALTER JAMES SEELEY (1925), E.E., M.S.
James B. Duke Professor of Electrical Engineering 1005 Urban Avenue
- JAMES HUSTEAD SEMANS (1953), M.D.
Associate Professor of Urology Bivins Street
- DAVID GORDON SHARP (1939), Ph.D.
Associate Professor of Biophysics in Experimental Surgery, and Biophysicist to Duke Hospital 202 Francis Street
- LAMBERT ARMOUR SHEARS (1927), Ph.D.
Associate Professor of German 917 Green Street
- JOHN F. SHERRILL, JR. (1953), M.D.
Instructor in Radiology 600 North Gregson Street
- MILDRED MARGUERITE SHERWOOD (1930), R.N.
Associate in Pediatric Nursing Hanes House
- JOHN HERMAN SHIELDS (1926), A.M.
Associate Professor of Accounting 1315 Vickers Avenue
- MELVIN G. SHIMM (1953), LL.B.
Assistant Professor of Law 2902 Erwin Road
- WILLIAM WARNER SHINGLETON (1947), M.D.
Assistant Professor of Surgery 1510 Carolina Avenue
- *ELWOOD BRENT SHIRLING (1952), M.S.
Instructor in Botany 872 Louise Circle, Poplar Apartments
- JOSEPH ROBERT SHOENFIELD (1952), B.S.E., M.S., Ph.D.
Instructor in Mathematics 1003 East Trinity Avenue
- GEORGE ADDISON SILVER, III (1946), M.D.
Assistant Professor of Psychiatry 2005 Arbor Street
- ALBERT J. SILVERMAN (1953), M.D.
Instructor in Psychiatry Duke Hospital
- †EDWARD CHRISTIAN SIMMONS (1947), Ph.D.
Professor of Economics 2510 Perkins Road
- WILLIAM HAYS SIMPSON (1930), Ph.D.
Associate Professor of Political Science 1406 Dollar Avenue
- WILLIAM VANCE SINGLETARY (1948), M.D.
Instructor in Medicine 306 South Gregson Street
- MARY CLYDE SINGLETON (1950), B.S., R.P.T.T.
Associate in Physical Therapy 819 Louise Circle, Poplar Apartments
- BENJAMIN SMITH SKINNER (1946), M.D.
Instructor in Pediatrics 403 Jackson Street
- ALBERT G. SMITH (1951), M.D.
Associate in Pathology 826 Louise Circle, Poplar Apartments

* Resigned, August 31, 1953.

† Absent on sabbatical leave, fall semester, 1953-54.

- DAVID TILLERSON SMITH (1930), M.D., Litt.D. 3437 Dover Road, Hope Valley
Professor of Bacteriology, and Associate Professor of Medicine
- FRANK M. SMITH (1951), M.A., Captain, U. S. Air Force 1425 Pennsylvania Avenue
Assistant Professor of Air Science
- GROVER C. SMITH, JR. (1952), Ph.D. 866 Louise Circle, Poplar Apartments
Instructor in English
- HILRIE SHELTON SMITH (1931), Ph.D., D.D., Litt.D. 2721 Dogwood Road
James B. Duke Professor of American Religious Thought
- JOHN B. K. SMITH (1953), M.B., Ch.B., M.D. Highland Hospital, Asheville, N. C.
Associate in Psychiatry
- ROBERT SIDNEY SMITH (1932), Ph.D. 2236 Cranford Road
Professor of Economics
- MRS. SUSAN GOWER SMITH (1930), M.A. 3437 Dover Road, Hope Valley
Associate in Nutrition
- WILLIAM RODGER SMYTHIE, JR. (1952), A.M. 1115 West Chapel Hill Street
Instructor in Mathematics
- *MARY HELEN SNIVELY (1930), M.A., A.N.A. 2913 Horton Road
Associate in Anesthesiology
- *WILLIAM BREWSTER SNOW (1948), Sc.D. 1022 West Trinity Avenue
Associate Professor of Civil Engineering
- RAYMOND STEPHEN SORENSEN (1952), M.S. in P.E. Piedmont Apartments
Instructor in Physical Education
- JOSEPH JOHN SPENGLER (1934), Ph.D. 2240 Cranford Road
Professor of Economics
- HERTHA D. E. SPONER (1935), Ph.D. 3309 Avon Road, Hope Valley
Professor of Physics
- ANABEL STANFORD (1953), M.A. Duke Hospital
Instructor in Social Service
- DALE FISHER STANSBURY (1946), J.S.D. 1008 West Trinity Avenue
Professor of Law
- †HELEN STARKE (1948), M.D. Cole Mill Road
Instructor in Medicine
- EUGENE ANSON STEAD, JR. (1947), M.D. 2122 Myrtle Drive
Florence McAlister Professor of Medicine
- FRANK H. STELLING (1952), M.D. Shriners Hospital, Greenville, N. C.
Lecturer in Orthopaedic Surgery
- CHARLES RONALD STEPHEN (1950), M.D.C.M., D.A., R.C.P.&S. 1509 Carolina Avenue
Professor of Anesthesiology and Chief Anesthetist
- DAVID B. STEVENS (1951), LL.B., Captain, U. S. Air Force 2121 Sprunt Street
Instructor in Air Science
- HARRY R. STEVENS (1947), Ph.D. University Apartments
Assistant Professor of History
- WILLIAM FRANKLIN STINESPRING (1936), Ph.D. 1107 Watts Street
Professor of Old Testament
- FREDERICK WILLIAM STOCKER (1943), M.D. 1124 Forest Hills Boulevard
Associate Professor of Ophthalmology
- JEAN STEVENS STOCKTON (1953), B.S. 601 Watts Street
Instructor in Physical Education

* Resigned, August 31, 1953.

† Resigned, January 31, 1953.

- CARL HENRY STOLIENBERG (1951), Ph.D.
Assistant Professor of Forest Economics 942 Lambeth Circle, Poplar Apartments
- PAUL CLINTON STOTTEMEYER (1953), B.S. in C.E., M.S. in Hydraulic Engineering
Instructor in Civil Engineering 835 Louise Circle, Poplar Apartments
- *FLOYD STOVALL (1953), Ph.D.
Professor of English Chapel Hill, N. C.
- DONALD W. SIRASBURG (1953), Ph.D.
*Instructor in Zoology and Assistant to the Director of the
 Duke University Marine Laboratory* 857 Louise Circle, Poplar Apartments
- HOWARD AUSTIN SIROBEL (1948), Ph.D.
Assistant Professor of Chemistry 1013 Dacian Avenue
- WIPPERT ARNOT STUMPF (1948), Ph.D.
Associate Professor of Education 127 Pinecrest Road
- CHARLES WOODROW STYRON (1946), M.D.
Associate in Medicine 204 East Park Drive, Raleigh, N. C.
- †HERBERT WILFRID SUGDEN (1929), Ph.D.
Assistant Professor of English H3C University Apartments
- ROBERT BURKE SUITT (1940), M.D.
Assistant Professor of Psychiatry 215 Faculty Apartments
- ELIZABETH READ SUNDERLAND (1939-42; 1943), Ph.D.
Associate Professor of Art 6416 College Station
- DOTY LOUISE SUTHERLAND (1953), R.N., B.S.
Instructor in Surgical Nursing University Apartments
- LOUIS EARL SWANSON (1949), A.B.
*Assistant Professor of Hospital Administration,
 and Assistant Supervisor of the Hospital* 2610 Shenandoah Avenue
- CHARLES SACKETT SYDNOR (1936), M.A. (Oxon.), Ph.D., Litt.D., LL.D.
James B. Duke Professor of History 116 Pinecrest Road
- ‡ALLAN TAYLOR (1953), M.D.
Associate in Radiology Box 3603, Duke Hospital
- CHESTER R. TAYLOR (1951)
Associate in Experimental Surgery 519 East Club Boulevard
- §HARVEY GRANT TAYLOR (1940), M.D.
*Associate Professor of Pediatrics and Bacteriology,
 and Assistant Dean of Medical School* Route 2, Hillsboro, N. C.
- HAYWOOD MAURICE TAYLOR (1930), Ph.D.
Associate Professor of Biochemistry, and Professor of Toxicology 2620 University Drive
- KENNETH JOHN THARP (1953), B.S. in C.E.
Instructor in Civil Engineering Apartment 03, 821 Demerius Street
- JOSEPH MILLER THOMAS (1930), Ph.D.
Professor of Mathematics 2215 Cranford Road
- WALTER LEE THOMAS, JR. (1932-35; 1937-42; 1945), M.D.
Associate Professor of Obstetrics and Gynecology 3615 Dover Road, Hope Valley
- EDGAR TRISTRAM THOMPSON (1935), Ph.D.
Professor of Sociology 138 Pinecrest Road
- ROBERT L. THURSTONE (1953), M.S. in E.E.
Instructor in Electrical Engineering 400 Laurel Hill Road, Chapel Hill N. C.

* Spring semester, 1952-53.

† Absent on sabbatical leave, 1953-54.

‡ Resigned, January 19, 1954.

§ Resigned, December 31, 1953.

- KATHARINE TILLEY (1953), B.S. in N.Ed.
Instructor in Psychiatric Nursing
at Highland Hospital Highland Hospital, Asheville, N. C.
- BARNEY FOREMAN TIMMONS (1952), M.D.
Instructor in Otolaryngology 905 Lambeth Circle, Poplar Apartments
- ELIAS TORRE (1951), M.A.
Assistant Professor of Romance Languages 1121 Anderson Street
- EUGENE J. TOWBIN (1952), M.D.
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- *MARTIN BICE TRAVIS, JR. (1949), Ph.D.
Assistant Professor of Political Science 1405 Watts Street
- JAMES R. TRIMBLE (1953), M.D.
Instructor in Medicine Apartment 3-C, 808 Green Street
- JAMES NARDIN TRUESDALE (1930), Ph.D.
Associate Professor of Greek 2804 Erwin Road, Poplar Apartments
- ARLIN TURNER (1953), Ph.D.
Professor of English 912 Green Street
- MRS. VIOLET HORNER TURNER (1943), M.D.
Assistant Professor of Obstetrics and Gynecology 2106 Cole Road
- RICHARD LOVEJOY TUTHILL (1953), Ed.D.
Professor in the Faculty of Arts and Sciences 1014 Gloria Avenue
- LUELLA JANE UHRHANE (1947), R.N., M.P.H.
Assistant Professor of Health Education 208 Faculty Apartments
- CHARLES ROWE VAIL (1939), M.S. (E.E.)
Associate Professor of Electrical Engineering 900 Dacian Avenue
- F. JOHN VERNBERG (1951), Ph.D.
Instructor in Zoology 854 Louise Circle, Poplar Apartments
- FRANCISCO A. VIAU (1952), M.D.
Instructor in Medicine 2308 Pratt Street
- CLEMENT VOLLMER (1926), Ph.D.
Professor of German 2114 Myrtle Drive
- HERBERT VON BECKERATH (1953), Ph.D.
Professor of Economics and Political Science Chapel Hill, N. C.
- †WARREN CHASE VOSBURGH (1928), Ph.D.
Professor of Chemistry 2319 Englewood Avenue
- ALBERT EDWARD WACKERMAN (1938), M.F.
Professor of Forest Utilization 3610 Dover Road, Hope Valley
- MRS. ELIZABETH R. WAGGONER (1953), B.S. in Occupational Therapy
Instructor in Occupation Therapy 2723 Brown Avenue, Poplar Apartments
- *JAMES ELIAS WALTER (1950), I.A.
Instructor in Economics 214 Swift Avenue
- ARLEY JOHN WALTON (1948), B.S.L., D.D.
Associate Professor of Practical Theology,
and Director of Field Work 803 Second Street
- LORING BAKER WALTON (1929), Lic. ès L., Ph.D.
Professor of Romance Languages 2235 Cranford Road
- DAVID M. K. WANG (1952), M.D.
Instructor in Medicine Duke Hospital

* Resigned, August 31, 1953.

† Absent on sabbatical leave, spring semester, 1953-54.

- CALVIN LUCIAN WARD (1952), Ph.D.
Instructor in Zoology 801 Third Street
- CHARLES EUGENE WARD (1927), Ph.D.
Professor of English 2429 Perkins Road
- JAMES VAUGHN WARREN (1942), M.D.
*Professor of Medicine, and Chief of
Medical Service, Veterans Administration* D3A University Apartments
- *JOHN RUSH WARREN (1946), Ph.D.
Assistant Professor of Botany 2002 Ruffin Street
- GEORGE ARCHIBALD WATSON, JR. (1950), M.D.
Instructor in Pediatrics 306 South Gregson Street
- RICHARD LYNESS WATSON, JR. (1939), Ph.D.
Associate Professor of History 109 Pinecrest Road
- VERNON ELGIN WAY (1930), A.M., M.A.
Assistant Professor of Greek 918 Urban Avenue
- BAILEY DANIEL WEBB (1949), M.D., Ph.D.
Instructor in Pediatrics 317 West Trinity Avenue
- ALFRED C. WEBSTER (1953)
Instructor in Medical Photography 3412 Guess Road
- KENNETH DURHAM WEEKS (1947), M.D.
Instructor in Medicine 1605 West Thomas Street
Rocky Mount, N. C.
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Assistant Professor of Undergraduate Religion 1403 Norton Street
- ‡GEORGE WILLARD WHARTON, JR. (1939), Ph.D.
Associate Professor of Zoology 1202 Oval Drive
- ‡ARTHUR REMINGTON WHITE, JR. (1951), B.S. in C.E.
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- MRS. MARIE ANNE UPDIKE WHITE (1930), A.M.
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Assistant Professor of Sociology Box 6326, College Station
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Assistant Professor of Social Service H2B University Apartments
- KARL MILTON WILBUR (1946), Ph.D.
Professor of Zoology 910 Lambeth Circle, Poplar Apartments
- LESLIE CLIFFORD WILBUR (1949), M.S.
Assistant Professor of Mechanical Engineering Route 3, Hillsboro, N. C.
- RALPH SYDNEY WILBUR (1933), B.S. in M.E., M.E.
Professor of Mechanical Engineering 1018 Demerius Street
- PELHAM WILDER, JR. (1949), Ph.D.
Assistant Professor of Chemistry 2525 Glendale Avenue

* Resigned, July 15, 1953.

† Absent on sabbatical leave, 1953-54.

‡ Resigned, August 31, 1953.

- *WILLIAM EDGAR WILKINSON (1949), M.D.
*Professor of Military Science and Tactics,
 and Associate in Psychiatry* 1204 Ruffin Street
- †CLAIRE WILLIAMS (1941), B.S., M.A. in P.E.
Instructor in Physical Education 211 Faculty Apartments
- D. MCGREGOR WILLIAMS (1947), B.S.
Lecturer in Preventive Medicine and Public Health 1107 Alabama Avenue
- JAMES WESLEY WILLIAMS (1937), A.B., B.S. in C.E., M.S.
Associate Professor of Civil Engineering 206 Swift Avenue
- PHILIP WILLIAMS, JR. (1949), Ph.D.
Assistant Professor of English 808 Louise Circle, Poplar Apartments
- ROBERT MARSHALL WILLIAMSON (1951), Ph.D.
Assistant Professor of Physics 20 Meadowbrook Drive
- ‡EDWARD PIERCE WILSON, JR. (1951), B.S., Lieutenant, U. S. Navy
Assistant Professor of Naval Science Randolph Road
- FLORENCE KISSICK WILSON (1946), R.N., M.A.
Professor of Nursing Education 116 Faculty Apartments
- FREDERICK ELIPHAZ WILSON (1923), A.M.
Associate Professor of German 1020 Demerius Street
- JENNET WILSON (1952), R.N., B.S.
Instructor in Obstetrics 402 Buchanan
- ROBERT RENBERT WILSON (1925), Ph.D., LL.D.
Professor of Political Science 717 Anderson Street
- WILLIAM PRESTON WILSON (1950), M.D.
Associate in Psychiatry Hillandale Road
- MRS. ELIZABETH WINFREY (1953), A.B., M.S.S.
Instructor in Social Service 111D Glen Lennox, Chapel Hill, N. C.
- THOMAS G. WINNER (1948), Ph.D.
Assistant Professor of Russian Language and Literature 1813 Hillcrest Drive
- LOREN RALPH WITHERS (1949), M.S.
Assistant Professor of Music 8 Duke University Apartments
- FREDERICK ADOLPHUS WOLF (1927), Ph.D.
James B. Duke Professor of Botany 924 Urban Avenue
- JAMES HENRY WOOD (1952), M.A.
Assistant Professor of Music 635 Cranford Avenue
- BARNES WOODHALL (1937-43; 1945), M.D.
Professor of Neurosurgery 4006 Dover Road, Hope Valley
- §ROBERT HILLIARD WOODY (1929), Ph.D.
Professor of History 2648 University Drive
- MRS. ELEANOR JANE HERRING WOOTEN (1950), M.D.
Instructor in Pediatrics 817 Hillsboro Street, Raleigh, N. C.
- DEWITT WRIGHT (1943), J.D.
*Associate in Hospital Administration, and
 Assistant Superintendent of the Hospital* Route 2, Hillsboro, N. C.
- †WARREN GRICE YATES (1949), A.M.
Instructor in German 409 Carver Street

* Resigned, August 31, 1953.

† Absent on leave, 1953-54.

‡ Resigned, May 31, 1953.

§ Absent on sabbatical leave, fall semester, 1953-54.

- *ELISABETH SIELLE YEARICK (1953), M.S.
Assistant Professor of Dietetic Instruction 305 Erwin Apartments
- MRS. IRIS CLARK YEO (1953), M.A., M.S.W.
Instructor in Social Service 121B Glen Lennox, Chapel Hill, N. C.
- DAVID A. YOUNG (1946), M.D.
Lecturer in Psychiatry Raleigh, N. C.
- FRED WILLIAM ZECHMAN, JR. (1953), M.S.
Instructor in Physiology 314 Clark Street
- KARL EDWARD ZENER (1928), Ph.D.
Professor of Psychology Route 2, Sparger Road
- HALINA ZUKOWSKI (1950), R.N., B.S., M.L.
Assistant Professor of Psychiatric Nursing 706 Louise Circle, Poplar Apartments

PART-TIME INSTRUCTORS

- PHILIP BAYLESS (1953), A.B.
Chemistry and Research Associate 1606 North Duke Street
- FRANK O. BOWMAN, JR. (1952), B.S.
Geology Department of Geology
 University of North Carolina, Chapel Hill, N. C.
- †MRS. C. J. BRYAN (1953), *Baccalauréat, Lic. en Droit*
Romance Languages 814 Demerius Street
- H. LAWRENCE CLEVER (1952), Ph.D.
Chemistry and Research Associate 1912 House Avenue
- GEORGE ARTHUR DELHOMME, JR. (1950), M.A.
Latin 1503 Miami Boulevard
- ‡MRS. DON E. DISMUKES (1953), A.M.
Romance Languages F2C University Apartments
- MURRAY SCOTT DOWNS (1953), M.A.
History Box 1086, Men's Graduate Center
- WILLIAM KEIRCE (1953), B.M.E., M.A.
English Box 1047, Men's Graduate Center
- §J. C. MCPHERSON (1953), M.S.
Mathematics
- ISAAC NEWELL (1953), B.A.
English 604 Cleveland Street
- L. E. PADGETT, JR. (1953), A.B.
English Box 4403, Duke Station
- CLYDE H. ROBERTSON (1953), M.A., B.Phil.
Zoology 2728 Brown Avenue, Poplar Apartments
- ANGEL MAROTO RUBIO (1952), M.A.
Romance Languages 140-B Graduate Center Annex
- WALTER G. SMITH (1953), B.S. in M.E.
Mechanical Engineering 2842 Chapel Hill Road
- WILLIAM K. STARS (1953), M.A.
Aesthetics, Art and Music 912 Flora Street
- EUGENE H. THOMPSON (1952), M.A.
Romance Languages 1417 Watts Street

* Resigned, October 31, 1953.

† Spring semester, 1953-54.

‡ Fall semester, 1953-54.

§ Spring semester, 1952-53.

ELMUS ROGERS WICKER (1953), M.A., B.Phil. (Oxon.)

Economics

1024 Monmouth Avenue

DONALD P. WYLIE (1952), M.B.A., J.D.

Mathematics

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2305 Club Boulevard

*MRS. GRACE C. BODDIE (1951), LL.B.

1711 Shawnee Street

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Apartment Q-1, 818 Demerius Street

ALTON J. KNIGHT (1938), LL.B.

Fish Dam Road

L. STACY WEAVER (1953) LL.B.

853 Louise Circle, Poplar Apartments

JACK C. WOODALL (1951), LL.B.

1405 Vickers Avenue

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Preacher to the University

2117 Myrtle Drive

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Chaplain to the University and Director of Religious Life

804 Third Street

ANN HUTCHESON, M.R.E.

Associate Director of Student Religious Life, Woman's College

Faculty Apartments

*ETHELENE SAMPLEY

Director of Student Religious Life, Woman's College

Faculty Apartments

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Associate Director of Student Religious Life, West Campus

Duke University Apartments

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West Campus

†WADE FRANKLIN HOOK, B.D.

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Poplar Apartments

JOSEPH WILLIAM O'BRIEN, B.D.

Chaplain to Episcopal Students

903 W. Markham Avenue

CONSTANCE F. PARVEY, B.A.

Advisor to Lutheran Students

Aycock House

* Resigned, August 31, 1953.

† Resigned, October 31, 1953.

EDWIN RUSSELL SPANN, B.D. <i>Chaplain to Methodist Students</i>	1019 West Markham Avenue
MAX WILLIAM WICKER, B.D. <i>Chaplain to Baptist Students</i>	Men's Graduate Center
RUSSELL LESLIE DICKS, B.D., D.D., Litt.D. <i>Chaplain of Duke Hospital</i>	2308 Prince Street

STUDENT HEALTH

ELBERT LAPSLEY PERSONS, M.D. <i>Director of Student Health</i>	723 Anderson Street
CAROLINE E. HELMICK, M.D. <i>Director of Student Health, Woman's College</i>	East Campus Infirmary
MOZELLE VESTAL, R.N. <i>Resident Nurse, Woman's College</i>	East Campus Infirmary
MRS. BARBARA ALLEN FAWCETT, R.N. <i>Nurse, Woman's College</i>	324 Monmouth Avenue
MRS. OLLIE PHILLIPS BURNETT, R.N. <i>Head Nurse, West Campus</i>	1404 Arnette Avenue
MRS. MARY EVA SCHOFIELD, R.N. <i>Nurse, West Campus</i>	307 North Gregson Street

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JAMES FOSTER BARNES, A.M. <i>Director of Choral Music</i>	2401 Cranford Road
MRS. JAMES FOSTER BARNES <i>Director of Woman's College Glee Club</i>	2401 Cranford Road
ALLAN HADLEY BONE, M.M. <i>Conductor of the Chamber and Symphony Orchestras</i>	2314 Club Boulevard
ANTON BREES <i>University Carillonneur</i>	Duke University
PAUL ROBEY BRYAN, M.M. <i>Conductor of the Concert and Marching Bands</i>	Duke University Apartments
MRS. MILDRED LITTLE HENDRIX, B.S. <i>University Organist</i>	144 Pinecrest Road
WILLIAM KLENZ, M.A. <i>Conductor of the Collegium Musicum</i>	15 Alastair Court
MRS. EUGENIA CURTIS SAVILLE, M.A. <i>Director of the Madrigal Singers</i>	1103 Anderson Street
MRS. JOSEPHINE W. STIPE, A.B. <i>Art Curator</i>	2114 Club Boulevard
ROBERT E. STIPE, LL.B. <i>Record Librarian</i>	2114 Club Boulevard
*MARY HELEN STONE, A.B. <i>Art Curator</i>	2114 Club Boulevard

Physical Education, Trinity College

EDMUND McCULLOUGH CAMERON (1926), A.B. <i>Director of Physical Education and Athletics</i>	2818 Chelsea Circle, Hope Valley
JAMES ROBERT BLY (1949), M.S. <i>Assistant Professor of Physical Education; Coach of Soccer; Director, Intramural Athletics</i>	University Apartments

* Resigned, June 30, 1953.

- HAROLD L. BRADLEY (1950), B.S.
Instructor in Physical Education; Coach of Basketball 1903 Washington Street
- HERSCHEL AMOS CALDWELL (1930)
*Coach of Freshman Baseball, and Assistant
 Coach of Football* 3100 Devon Road, Hope Valley
- ROBERT LEE CHAMBERS (1933), B.S. in Ed.
Coach of Varsity Track; Head Trainer 2311 Prince Street
- ROBERT CALVIN COX (1942), M.A.
*Instructor in Physical Education; Assistant Coach of
 Football; Coach of Varsity Tennis* 1826 Guess Road
- ANTHONY CHARLES DRAGO, B.S. in P.E.
Instructor in Physical Education; Assistant Coach of Basketball 1318 Gregson Street
- CARMEN M. FALCONE (1946), M.A.
*Assistant Professor of Physical Education; Coach of Varsity
 Wrestling; Assistant in Football* University Apartments
- ELLIS P. HAGLER (1936)
Coach of Varsity Golf; Assistant Coach of Football 220 Forest Wood Drive
- FRANCIS PARKS HARRISON (1947), M.A.
*Assistant Professor of Physical Education;
 Assistant Coach of Wrestling* 2511 Pickett Road
- * JOHN WILLIAM HENDRIX (1947), M.S.
Instructor in Physical Education; Coach of Varsity Tennis 1019 Oakland Avenue
- DAN WINFIELD HILL (1945), A.B.
Assistant Athletic Director 2527 Glendale Avenue
- HUBERT MURRY LEWIS (1937), B.S.
Business Manager of Athletics Pickett Road
- ROBERT JOHN MONIFORT (1940), B.A.
Assistant Professor of Physical Education; Assistant Trainer 3300 Cole Mill Road
- WILLIAM D. MURRAY (1951), A.B.
Head Coach of Football 2106 Myrtle Drive
- THOMAS J. O'BOYLE (1951), B.E. in P.E.
Assistant Coach of Football 233 Forest Wood Drive
- CLARENCE MCKAY PARKER (1947)
Assistant Coach of Football, and Coach of Baseball Westover Park Apartments
- WALTER SCOTT PERSONS (1930), A.B.
*Assistant Professor of Physical Education; Coach of
 Swimming; Coach of Lacrosse* 612 Swift Avenue
- MARTIN T. PIERSON (1951), M.C.E.
Assistant Coach of Football Poplar Apartments
- RAYMOND STEPHEN SORENSEN (1952), M.S. in P.E.
Instructor in Physical Education; Coach of Gymnastics 1211 Ruffin Street

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- † EVELYN BARNES, B.S.
Counselor, Alsapough House Alsapough House
- LEAH BODDIE, A.M.
Counselor, Southgate Hall Southgate Hall
- * JEAN BRACKMAN, A.M.
Counselor, Bassett House Bassett House

* Resigned, August 31, 1953.

† Died, June 1, 1953.

WINIFRED FELLERS, A.M. <i>Counselor, Alspaugh House</i>	Alspaugh House
LILLIAN A. LEE, A.B. <i>Counselor, Pegram House</i>	Pegram House
*DOROTHY J. MARPLE, A. M. <i>Assistant in the Office of the Dean of Undergraduate Women; Counselor, Aycock House</i>	Aycock House
*KATHARINE HILL MIMS, A.M. <i>Counselor, Pegram House</i>	Pegram House
CONSTANCE F. PARVEY, A.B. <i>Counselor, Aycock House</i>	Aycock House
MARY ROWLAND ROBINSON, A.B. <i>Counselor, Jarvis House</i>	Jarvis House
MRS. HARRIET M. TAYLOR <i>Counselor, Giles House</i>	Giles House
*MARY MOSS WELLBORN, A.M. <i>Counselor, Jarvis House</i>	Jarvis House
MAXINE JOURDAN WESTPHAL, A.M. <i>Counselor, Bassett House</i>	Bassett House
MRS. FRANCES M. WHITAKER, A.M. <i>Assistant to the Dean of Undergraduate Women; Counselor, Brown House</i>	Brown House

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†MRS. MARY NORCOTT PEMBERTON <i>Hostess, West Campus</i>	West Campus Union
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RUBY MORGAN SHERIDAN, B.S. <i>Service Supervisor, the Dining Halls, Men's Colleges</i>	Poplar Apartments
‡MRS. THOMAS DELONG, A.B. <i>Manager, the Dining Hall, Southgate Hall</i>	2347 Huron Street
MARVIN G. JOHNSON <i>Personnel Supervisor the Dining Halls, Woman's College</i>	1304 N. Duke Street
MARTHA ANN MYER, B.S. <i>Assistant Manager, the Dining Halls, Woman's College</i>	Southgate Hall
§A. PAULINE SPROUL <i>Student Personnel Supervisor, the Dining Halls</i>	Poplar Apartments
MARTHA JUNE WILLETT <i>Manager, the Dining Hall, Southgate Hall</i>	Southgate Hall
RALPH J. WATKINS, B.S. <i>Assistant Manager, the Dining Halls, Men's Graduate Center</i>	310 Cherry Grove Street

* Resigned, August 31, 1953.

† Retired, August 31, 1953.

‡ Resigned, May 31, 1953.

§ Resigned, September 30, 1953.

THE UNIVERSITY STORES

WILLIAM T. BLALOCK <i>Manager, Hospital Store</i>	3515 East Oak Drive
LEON S. BROOKS <i>Manager, Woman's College Store</i>	904 Arnette Avenue
EARL W. WILSON, A.B. <i>Manager, University Bookstore</i>	1705 Ruffin Street

The University Libraries

BENJAMIN E. POWELL, Ph.D. <i>Librarian</i>	3609 Hathaway Road, Hope Valley
CARLYLE JAMES FRAREY, M.S. <i>Assistant Librarian</i>	819 Demerius Street

UNIVERSITY LIBRARY

MRS. ALICE GEORGE BAUER, A.B., B.S. in L.S. <i>Serials Cataloger</i>	2726 Erwin Road
MRS. PAULINE C. BEERS, A.B. <i>Assistant Curator of Manuscripts</i>	315 West Trinity Avenue
MARY ELIZABETH BITTING, M.A. <i>Subject Cataloger and Pamphlets Librarian</i>	2105 Club Boulevard
MRS. ELIZA K. BLACKMON, B.A. <i>Assistant in Charge of Binding</i>	2321 Erwin Road
FLORENCE E. BLAKELY, B.A., B.S. in L.S. <i>Reference Librarian</i>	1004 West Trinity Avenue
MRS. THERESA BROWN, A.B. <i>Bibliographer</i>	2009 Club Boulevard
MARY WHITFIELD CANADA, A.M. <i>Librarian, Undergraduate Reading Room</i>	1312 Second Street
MRS. JOAN SMITH CLARK <i>Assistant, Rare Books</i>	2729 Brown Avenue
MRS. CAROLYN CORSON, B.A. <i>Assistant, Circulation</i>	315 West Trinity Avenue
LENA COVINGTON, A.B., A.B. in L.S. <i>Head, Subject Cataloging</i>	403 Watts Street
MRS. MARY COX, B.A. <i>Assistant, Biology-Forestry Library</i>	1826 Guess Road
MARY ELLEN DARST, B.S., B.S. in L.S. <i>Bibliographer</i>	1206 West Markham Avenue
MILDRED G. EMMONS, B.A. <i>Serials Cataloger</i>	1004 West Trinity Avenue
ESTHER EVANS, A.B., B.S., in L.S. <i>Subject Cataloger</i>	708 Louise Circle
EMERSON FORD, B.D. <i>Assistant, Circulation</i>	308 Holloway Street
MRS. MARY GAYLOR <i>Librarian, Chemistry</i>	2123 Englewood Avenue
CAMILLE GERVAIS, B.S. in L.S. <i>Descriptive Cataloger</i>	1111 Urban Avenue

MRS. JOYCE HANSON, B.A. <i>Assistant, Serials</i>	909 Sixth Street
EDWIN J. HIX, B.A., A.B. in L.S. <i>Newspaper and Film Librarian</i>	1915 Bivins Street
MRS. EDWINA D. JOHNSON, B.S. <i>Librarian, Biology-Forestry</i>	608 North Gregson Street
R. MIRIAM JONES, A.B., M.L. in L.S. <i>Reference Librarian</i>	1014 Broad Street
MRS. ETHEL LONG KALE <i>Librarian, Engineering</i>	3325 Chapel Hill Road
DOROTHY F. KIRKLAND, A.B., A.B. in L.S. <i>Descriptive Cataloger</i>	2316 Englewood Avenue
MRS. EDITH V. KRAMER, M.A. <i>Subject Cataloger</i>	2251 Cranford Road
JI JI LONDON <i>Librarian, Physics-Mathematics</i>	1514 Edgevale Road
MRS. CORA LEDFORD, M.A. <i>Assistant, Order</i>	Hope Valley Road
WILHELMINA LEMEN, A.B., A.B. in L.S. <i>Documents Librarian</i>	2714 Shenandoah Avenue
JAY LUVAAS, M.A. <i>Director, George Washington Flowers Collection</i>	1837 Forest Road
PHILIP MCCOURY, B.A. <i>Assistant, Manuscripts</i>	802 Park Avenue
GERTRUDE MERRITT, A.B. <i>Chief, Technical Processing</i>	1028 Monmouth Avenue
EDWARD J. MYERS <i>Subject Cataloger</i>	102 Forest Wood Drive
MRS. ROSE MARY O'BOYLE <i>Assistant, Serials</i>	233 Forest Wood Drive
HELEN E. OYLER, A.B., B.S. in L.S. <i>Head, Serials Section</i>	115 Higbee Street
WIXIE E. PARKER, A.B., B.S. in L.S. <i>Periodicals Librarian</i>	Powe Apartments
MRS. EUGENIA PEARSON, A.B. <i>Librarian, Graduate Reading Room</i>	614 Shepherd Street
MRS. OLGA M. PERLZWEIG, Ph.D. <i>Bibliographer</i>	407 Swift Avenue
MRS. CATHARINE J. PIERCE, M.S. <i>Head, Reference Department</i>	222 Morris Street
MARY E. PLOWDEN, A.B., A.B. in L.S. <i>Head, Order Section</i>	12 Alastair Court, Swift Avenue
MRS. MARIAN REEVES, A.B. <i>Bibliographer</i>	904 Second Street
HONORA L. ROSE <i>Assistant, Order</i>	108 West Geer Street
MATTIE RUSSELL, M.A. <i>Curator of Manuscripts</i>	2209 Woodrow Street
MRS. LOUISE SANDERFORD <i>Assistant, Circulation</i>	705 Louise Circle
MRS. MARY E. SHERMAN <i>Assistant, Circulation</i>	2347 Huron Circle

MARY OPAL SHUFORD, A.B., A.B. in L.S. <i>Descriptive Cataloger</i>	805 Sixth Street
THOMAS M. SIMKINS, JR., M.A. <i>Curator of Rare Books</i>	614 North Gregson Street
SHIRLEY STEVENS <i>Assistant, Documents</i>	708 Louise Circle
JANE STURGEON, B.S., B.S. in L.S. <i>Head, Descriptive Cataloging Section</i>	115 Higbee Street
MRS. BETTY SWOFFORD, A.B. <i>Assistant, Periodicals</i>	Erwin Road and L. Street
ISAWO TANAKA, M.A., B.D. <i>General Assistant</i>	2511 Chapel Hill Road
MRS. MARGARET THOMSON, D.H. <i>Assistant, Circulation</i>	2243 Cranford Road
J. P. WAGGONER, JR., B.D., B.S. in L.S. <i>Head, Circulation Department</i>	1017 Lakewood Avenue
MARY WESCOTT, A.B., B.S. in L.S. <i>Assistant, Newspapers and Films</i>	903 Sixth Street
MRS. ERMA P. WHITTINGTON, A.B., B.S. in L.S. <i>Subject Cataloger</i>	2011 James Street

WOMAN'S COLLEGE LIBRARY

EVELYN J. HARRISON, A.B., B.S. in L.S. <i>Librarian</i>	403 Watts Street
MRS. FLORENCE FARMER, A.B. <i>Assistant, Circulation</i>	619 West Markham Avenue
EVELYN HANSEN, A.B., M.S. in L.S. <i>Cataloger</i>	923 Demerius Street
MRS. SPEARS HICKS, A.B., B.S. in L.S. <i>Reference Librarian</i>	121 West Seeman Street
FLORINE LEWTER, A.B., A.B. in L.S. <i>Periodicals Librarian</i>	1512 North Duke Street
MARGARET S. TILLET, A.B., A.B. in L.S. <i>Circulation Librarian</i>	1405 North Mangum Street

DIVINITY SCHOOL LIBRARY

DONN MICHAEL FARRIS, M.S. in L.S. <i>Librarian</i>	1018 Buchanan Boulevard
JOYCE G. LOCKHART, A.B. <i>Assistant in Divinity Library</i>	905 Sixth Street

LAW SCHOOL LIBRARY

MARIANNA LONG, A.B., B.S. in L.S. <i>Librarian</i>	403 Watts Street
MRS. LOIS K. CHAMBERS, B.S. in L.S. <i>Circulation Supervisor</i>	University Apartments
MADLINE COPELAND, A.B., A.B. in L.S. <i>Cataloger</i>	1018 Monmouth Avenue
MRS. DOROTHY COUCH <i>Assistant, Cataloging</i>	Hillsboro, N. C.
KATHARINE DAY, B.S. <i>Assistant Librarian</i>	512 Watts Street

MEDICAL SCHOOL LIBRARY

JUDITH FARRAR, A.B., B.S. <i>Librarian</i>	117 Faculty Apartments
MRS. MILDRED PERKINS FARRAR, A.B. <i>Assistant Librarian</i>	117 Faculty Apartments



The Women's College Auditorium

(from an etching by Louis Orr)

The Woman's College Auditorium, which encloses the north end of East, or the Woman's College, Campus, typifies the serene Georgian architecture amid which women students of the University live and work. The Woman's College campus is complete within itself, offering to its students the combined advantages of a small and intimate college which shares in the invigorating atmosphere of a larger and more cosmopolitan University.

Admission to the Colleges



CANDIDATES may qualify for admission as members of the freshman class or as students with advanced standing. Since the enrollment is limited, the Committee on Admissions selects students who, in its judgment, are best qualified to benefit from the educational advantages which the colleges offer. The Committee bases its decision on the academic record of the candidate, on test scores, and on satisfactory evidence of good character and general fitness for college life at Duke. A visit to the campus for a personal interview with an officer of the University is of material benefit to the candidate and the Committee.

ADMISSION TO THE FRESHMAN CLASS: A candidate for admission to the freshman class must present at least fifteen acceptable units of secondary school credit.

For admission to Trinity College and the Woman's College twelve of the fifteen units must be in English, foreign language, history* and social studies, mathematics, and science. They must include three units in English, one unit in algebra, and one unit in plane geometry. The three remaining units are elective and may be selected from those subjects for which the school allows credit toward graduation; but it is recommended that they also be selected from the five subject fields listed above.

For admission to the College of Engineering seven of the fifteen units must be in English (3 units), chemistry or physics (1 unit), algebra ($1\frac{1}{2}$ units), plane geometry (1 unit), and solid geometry† ($\frac{1}{2}$ unit). The remaining eight units are elective. At least five of them must be in English, foreign language, history and social studies, mathematics, and science. It is recommended that these five units be chosen from the following list:

English (in addition to the required 3 units).....	1 unit
Algebra (in addition to the required $1\frac{1}{2}$ units).....	$\frac{1}{2}$ to $1\frac{1}{2}$ units
Trigonometry	$\frac{1}{2}$ unit
Biology or chemistry or physics (in addition to the required unit)...	1 to 3 units
Foreign language	1 to 4 units
‡History and social studies.....	1 to 4 units

The three additional units needed to make the total of fifteen may be selected from those subjects for which the school allows credit

* Candidates who do not present two acceptable units of history must take history in college.

† Students may be admitted with a deficiency in solid geometry, but the deficiency must be removed before the beginning of the sophomore year.

‡ Engineering candidates who do not present at least one acceptable unit of history must take history in college.

toward graduation; but it is recommended that they also be chosen from the above list.

A graduate of an accredited secondary school who submits fifteen acceptable units of credit, who is recommended by his school principal, and who in all other respects meets the requirements of the Committee on Admissions may be admitted without examination. A candidate whose graduation is from a non-accredited school or about whom there may arise any other question as to qualification for admission may be required to take entrance examinations or such other tests as the Committee on Admissions may prescribe.

It is recommended that all candidates for admission to the freshman class take the Scholastic Aptitude Test of the College Entrance Examination Board or a similar program of tests administered on the Duke campus by the Duke University Bureau of Testing and Guidance. Details of the procedure to be followed in applying for either of these testing programs will be sent to each candidate for admission.

ADMISSION TO ADVANCED STANDING: A candidate for admission to advanced standing must have fulfilled the equivalent of the requirements for admission to the freshman class, must present official transcripts of all work completed in other institutions, and must have an honorable dismissal from each institution previously attended. Advanced standing candidates who have previously taken the Scholastic Aptitude Test of the College Entrance Examination Board should request the Board to send a report of their test scores to the Director of Admissions. All others are advised to take the Scholastic Aptitude Test or the program of tests administered by the Duke University Bureau of Testing and Guidance, as recommended for freshman candidates.

Credit for work completed at other institutions will be determined in relation to the curriculum requirements of the college in which the student enrolls at Duke.

A student who transfers with advanced standing to Trinity College or the Woman's College from a junior college or from a four-year college not affiliated with a regional accrediting association must continue, for at least one semester in Trinity College or in the Woman's College, the foreign language he or she presents for minimum graduation requirements. Credit for courses in science offered for advanced standing in any of the undergraduate colleges by a transfer from a junior college or a non-affiliated four-year college will be determined by the departments concerned.

Transfer credits are tentatively evaluated pending the completion of two semesters of work in residence. To validate provisional credits the student must earn at least an average of C in a normal load of work. Transfer credit, in which grades of C or above have been earned, is rated at one quality point per semester hour when validated. Courses

in which grades of less than C have been earned are not acceptable for transfer credit.

The maximum amount of credit acceptable from a junior college is 60 semester hours, exclusive of physical education. No credit is given for work completed by correspondence, and credit for no more than six semester hours is allowed for extension courses. Any extension work accepted must be specifically approved by the dean of the college to which the student seeks admission.

ADMISSION OF SPECIAL STUDENTS: Upon the approval of the dean, students of mature age may be admitted for special work in such courses of instruction as they are qualified to take. They may not be admitted as candidates for a degree in a regular course unless they meet all normal requirements for admission.

ADMISSION PROCEDURE: Application for admission to Trinity College and the College of Engineering should be made to the Director of Admissions, Trinity College and the College of Engineering, Duke Station, Durham, North Carolina. Application for admission to the Woman's College should be made to the Director of Admissions, Woman's College, College Station, Durham, North Carolina. Application forms and instructions will be sent to the candidate. It is the responsibility of the candidate to see that these forms are properly executed and, together with other requested material, sent promptly to the Director.

Application prior to the final year of the secondary school course is not required. Formal steps looking toward admission should be initiated, however, early in the senior year. Candidates for admission are requested to file all credentials by March 1. Candidates for admission to the Woman's College normally will receive notification of the decision of the Committee on Admissions between April 15 and May 1. Candidates for admission to Trinity College and the College of Engineering will be notified as decisions are made.

READMISSION OF FORMER STUDENTS: A student who, following withdrawal from college, desires to return should apply to the appropriate director of admissions. When applying for readmission the student should make a detailed statement of his or her activities since leaving Duke University.

Financial Information and Living Accommodations



FEES paid by the students cover only a part of the cost of their instruction and of the operations of the University. Income from endowment and contributions from the alumni, alumnae, and other public-spirited men and women meet the balance, which constitutes more than half the total cost.

Fees

A registration fee of \$20.00 is required of all new students. This fee is payable only once; it is not refundable. A room deposit of \$25.00 is also required of all new students. A tuition fee of \$175.00 and a general fee of \$75.00 are payable at the beginning of each semester. The general fee is in lieu of special fees usually charged for matriculation, use of laboratories, student health service, commencement, etc. Special fees for instruction in Applied Music are listed on page 110.

Due to rising costs a readjustment in charges, including room-rents, is being considered. In the event of an adjustment applicants will be notified.

An advance deposit of \$25.00 is required of all students in residence at the time of spring registration in order to reserve a place in classes for the fall semester. This is applied toward payment of the general fee at the opening of the fall semester. The deposit will be refunded to student whom the University does not permit to return. Students who of their own volition fail to return are not entitled to a refund.

An advance deposit of \$25.00 is also required of old students who have been out of school for one or more semesters and have been accepted for readmission. It is applied toward payment of the general fee for the semester of readmission. The advance deposit is paid at the time of notification of acceptance and is not refundable.

An Air Force ROTC deposit of \$20.00 is required of students enrolling in Air Science to cover possible loss of military equipment issued to them. This deposit is refunded to the student upon return of issued equipment.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and after the fifteenth day all fees are considered as earned and no refunds are made.

Students who register during the regular academic year for no more than two courses with a maximum credit of 8 semester hours are classified as special students. They are charged a registration fee of \$5.00 for each course, and \$12.00 for each semester hour of course credit. Students taking nine or more hours are charged full fees.

Auditors are permitted to attend classes provided they secure the consent of the instructor. They submit no daily work, take no examinations, and receive no credit. Students taking a full program and paying full fees may audit one or more courses without charge. Students not paying full fees are charged \$10.00 for each course each semester.

Students are entitled to one transcript free of charge. Additional copies are supplied at \$1.00 each. Records are not released when the Treasurer's Office reports an unpaid account.

Students may have their bills sent to parents or guardians provided the Treasurer has been notified in writing with sufficient antecedence. Failure of a student or of a parent or guardian to pay bills on the dates scheduled will debar the student from class attendance until his account is settled in full; subsequent withdrawal does not entitle him to a refund. No student is considered by the Faculty as a candidate for graduation until he has settled with the Treasurer for all his indebtedness to the University. A student who has not settled all his bills with the Treasurer is not allowed to stand the final examinations of the academic year.

Estimated Expenses for an Academic Year

Incidental expenses depend upon the tastes and habits of the individual, but the actual necessary expenses for an academic year are as follows:

	<i>Low</i>	<i>Moderate</i>	<i>Liberal</i>
Tuition	\$ 350.00	\$ 350.00	\$ 350.00
General Fee	150.00	150.00	150.00
Room Rent	100.00	125.00	200.00
Board	425.00	475.00	525.00
Laundry	30.00	40.00	50.00
Books	30.00	40.00	50.00
	<u>\$1,085.00</u>	<u>\$1,180.00</u>	<u>\$1,325.00</u>

The actual fees and expenses necessary for one year in residence as a student in Trinity College or the College of Engineering can be met with \$1,085.00.

Student Aid

Duke University is interested in students with ability and ambition. It is the aim of the University Scholarship Committee and others affiliated with the Student Aid Program to provide, insofar as possible,

the financial assistance required by worthy students. This assistance takes various forms. The actual cost to the University for each student is more than twice the amount received from the student. The deficit is paid out of contributions and income from endowment. Scholarships and prizes enable students with inadequate resources to reduce the amount payable to the University. Loans are made available, and through the Student Employment Offices part-time jobs are arranged. Through the Student Aid Program an earnest effort is made to eliminate the economic status of the student as a criterion for admission.

Scholarships

Scholarships intended to aid needy and deserving students have been established from time to time by persons deeply interested both in Duke University and in the members of its student body. Scholarship endowments are held in trust and are kept separate from other holdings of the University. All income is applied in accordance with the terms of the gift or bequest.

Scholarships are awarded annually by a committee of the Faculty appointed by the President of the University. In some cases donors have specified certain limitations and conditions, but in all cases final award is made by the University Scholarship Committee.

Candidates for competitive scholarship prizes should initiate applications during the fall semester of the senior year of study in secondary school. Instructions concerning the specific requirements and deadline dates will accompany the application materials sent to applicants for these awards.

Candidates for remissions of tuition and scholarship grants should submit applications by April 15 of the year prior to the academic year in which assistance is sought.

All applications for scholarship prizes, scholarship grants or remissions of tuition should be addressed to Mr. John M. Dozier, Executive Secretary Scholarship Committee, Duke University, Durham, North Carolina.

SCHOLARSHIP PRIZES: Certain scholarships are awarded annually to encourage as students young men and women who give outstanding promise of becoming leaders in their chosen fields of endeavor. Recipients of these awards are, in general, students whose superior intellect and excellence as scholars and leaders mark them as individuals who have the ability to influence and direct the course of affairs.

In considering applications for Scholarship Prizes, no weight is given by the Scholarship Committee to the financial situation of the candidate. The awards are based upon the proven merit of the individual rather than his need for financial assistance.

Eleven Angier Duke Regional Prizes of \$1,000.00 each are awarded annually to six men and three women who are residents of North Carolina and two men who are residents of South Carolina. Any resident of the State of North Carolina or male resident of South Carolina who meets the stated requirements is eligible to apply regardless of where he or she prepares for college.

Six Duke University Regional Scholarships of \$1,000.00 each are awarded annually to male residents of designated regions listed below. Any qualified resident of a designated region will be eligible to apply regardless of where he prepares for college.

Region I: The District of Columbia; Albemarle, Clarke, Culpeper, Fairfax, Fauquier, Frederick, Greene, Highland, King George, Loudoun, Madison, Orange, Page, Prince William, Rappahannock, Rockingham, Shenandoah, Spotsylvania, Stafford, Warren, Westmoreland counties and the city of Alexandria in Virginia; Montgomery and Prince Georges counties in Maryland.

Region II: The state of Virginia excluding those counties comprising a part of Region I.

Region III: The state of Florida.

Region IV: The state of Georgia.

Region V: The state of Tennessee.

Region VI: The state of West Virginia.

Three Duke University National Scholarships of \$1,000.00 each are awarded annually to women. Any qualified applicant for admission to the Woman's College of Duke University will be eligible to apply regardless of where she prepares for college.

Scholarship Prizes are awarded for one year and are renewable from year to year for a maximum duration of four years, on the condition that the holder maintain scholastic average in the upper quartile of his or her class and further that he or she show evidence of developing the qualities of leadership which served as the basis for the original award.

Candidates for Angier Duke Regional Prizes, Duke University Regional Scholarships, and Duke University National Scholarships must be eligible for admission to the freshman class of Trinity College, the College of Engineering, or the Woman's College in the ensuing academic year. A candidate must have attained scholastic standing in the highest twenty-five per cent of his or her class as of the closing date of his or her most recently completed semester at the time of application.

Fifteen honorary tuition scholarships are awarded annually to undergraduates in residence. Five are awarded to members of the sophomore class, five to members of the junior class, and five to mem-

bers of the senior class on the basis of the scholastic work of the preceding year.

REMISSIONS OF TUITION: Certain students attending Duke University are entitled to a remission of the tuition charge. Students in one of the privileged groups listed below are entitled to a maximum of eight semesters of free tuition at the undergraduate level. Each Summer Session in which work is taken and each semester spent in another institution will be counted as one of the eight allowable semesters. Only those students enrolled in the regular undergraduate program leading to a baccalaureate degree from Duke University are entitled to a remission of the tuition charge.

The purpose of the remission program is to assist the students in these categories to obtain a baccalaureate degree. It is assumed, therefore, that these students will make normal progress toward graduation. Failure to do so does not entitle a student to consideration for more than the allowable eight semesters.

All students entitled to a remission of tuition must apply to the Executive Secretary of the Scholarship Committee for this consideration. Students failing to receive remission for any part of their period of undergraduate study are not entitled to retroactive consideration.

GROUP I: All students preparing to enter full time religious work in a denomination maintaining a paid ministry are entitled to remission. Pre-Ministerial students are required to sign a note in the amount of their tuition at the beginning of each semester. The notes of all students from this group entering the ministry will be cancelled and returned to them. The notes of all students from this group failing to enter the ministry become due and payable with interest.

GROUP II: Children of ministers who are members of the North Carolina and Western North Carolina Conferences of the Methodist Church are entitled to remission as are the children of ministers of all faiths residing in Durham County, North Carolina. This consideration is given only to the children of resident members of the two North Carolina conferences who are giving their full time to religious work.

GROUP III: Remissions are given to the children, stepchildren, and adopted children of all staff members of Duke University in the following categories: (A) Staff members of the University listed in the catalog as "Officers of the University" who are employed on a full time basis. (B) "Officers Emeriti." (C) Any deceased staff member of the University listed in the catalog as an "Officer of the University" employed on a full time basis at the time of his or her death. (D) Deceased "Officers Emeriti."

ATHLETIC AWARDS: Duke University believes that a program of inter-collegiate athletics is a proper and desirable part of university life. Therefore, a limited number of Athletic Awards are available

for students participating in football and basketball. Only a part of the students on the team squads, however, hold awards. There are no athletic awards for participants in track, swimming, lacrosse, cross country, baseball, golf, tennis, soccer, wrestling, and gymnastics.

The Athletic Award covers only those items which are approved under the rules of the Atlantic Coast Conference and National Collegiate Athletic Association in which Duke University holds membership.

SCHOLARSHIP GRANTS: Although sufficient funds are not available to assist all applicants who present requests for aid, a substantial number of Scholarship Grants are made each year to able students who need financial assistance in order to meet the cost of attending college. Any candidate for admission, therefore, who considers himself or herself to be in such need is eligible to apply for a Scholarship Grant.

Applicants for Scholarship Grants will be required to submit a detailed statement of financial resources.

The following scholarship funds are available to undergraduates who apply for scholarship grants.

FRED SOULE ALDRIDGE SCHOLARSHIP FUND

Established December 1947 by gift of Fred S. Aldredge, '98, and Mrs. Fred Aldridge and supplemented by annual contributions from the Durham County Alumni; the income to be used for scholarship aid, preference to be given to young men from Durham County.

GEORGE G. ALLEN SCHOLARSHIP FUND

Established July 1947 by gift of George G. Allen; the income to be used for scholarship aid to deserving boys and girls from Warren County, N. C., and, under certain conditions, to other worthy students.

ALUMNAE SCHOLARSHIP FUND

Established May 1940 by the Alumnae Association, in connection with the celebration of the Centennial of Duke University; the income to be used for scholarship aid to young women students of the Woman's College.

ALUMNI MEMORIAL SCHOLARSHIP FUND

Established December 1943 by several donors in memory of alumni of Duke University who lost their lives during World War II; the income to be used for scholarship aid to worthy students.

ATLANTA ALUMNI SCHOLARSHIP FUND

Established May 1941 by gifts of members of the Alumni Association of Atlanta, Ga.; the income to be used for scholarship aid to worthy students.

ALICE M. BALDWIN SCHOLARSHIP FUND

Established June 1945 and supplemented from time to time by gifts from students and alumnae in honor of Alice M. Baldwin, Dean of the Woman's College, 1923-1947; also supplemented by a gift from the Class of 1951 of the Woman's College in memory of Berenice Lipscomb and Betsy Thorup; to be used for scholarship aid to undergraduate students in the Woman's College.

BANKS-BRADSHAW SCHOLARSHIP FUND

Established 1913 by gift of W. L. Banks and Mike Bradshaw, '78; the income to be used for scholarship aid to worthy students.

HERBERT J. BASS SCHOLARSHIP

Established 1900 by gift of Mr. and Mrs. Herbert J. Bass of Durham, N. C., in memory of their son, Herbert J. Bass, Jr.; the income to be used for scholarship aid to worthy students.

EDGAR S. BOWLING SCHOLARSHIP FUND

Established 1928 by gift of Edgar S. Bowling, '99, in memory of his sister, Mrs. Maye Bowling Bennett, '12; the income to be used for scholarship aid, preference to be given to boys and girls from Durham and adjoining counties.

ELIZABETH CROWELL CARNES FOUNDATION

Established January 1948 by bequest of Elizabeth Crowell Carnes, in memory of her parents, Jonas William Crowell and Virginia Vick Crowell; the income to be used for scholarship aid for young men and women of Duke University.

CENTENNIAL SCHOLARSHIP FUND

Established 1939 by gifts from several donors in connection with the Centennial celebration of Duke University; the income to be used for scholarship aid to worthy students.

CHRISTIAN EDUCATION SCHOLARSHIP FUND

Established by various contributions designated for scholarships in the Christian Education Movement; includes contributions from Julian S. Carr, Mrs. Annie A. Foushee, C. T. Johnson, H. E. Myers, the Pegram Family, W. P. Suggs, E. T. White, Mr. and Mrs. J. C. Braswell and Mrs. R. C. Bruton, in memory of Alexander Walker; the Alumni of Harnett County, and others; the income to be used for scholarship aid to worthy students.

CLASS OF 1906 SCHOLARSHIP FUND

Established July 1937 by gifts from several members of the Class of 1906; the income to be used for scholarship aid to worthy students.

CLASS OF 1912 SCHOLARSHIP FUND

Established by gifts from several members of the Class of 1912; the income to be used for scholarships to worthy students.

CLASS OF 1914 SCHOLARSHIP FUND

Established December 1938 during the Centennial celebration of Duke University, by various members of the class; the income to be used for scholarship aid to worthy students, preference to be shown to descendants of the members of the Class of 1914.

CLASS OF 1918 SCHOLARSHIP FUND

Established by gifts from several members of the Class of 1918; the income to be used for scholarship aid to worthy students.

E. M. COLE FOUNDATION

Established 1920 by E. M. Cole, Charlotte, N. C.; the income to be used for scholarships for the benefit of undergraduate students preparing for the ministry.

ROBERT B. COX SCHOLARSHIP FUND

Established 1949 by gift of Robert L. Wolf and supplemented from time to time by other gifts; the income to be used for scholarship aid to undergraduate men.

WILL L. CUNINGGIM SCHOLARSHIP

Established 1934 by bequest of Mrs. W. L. Cuninggim, and supplemented by bequest of Mrs. Albert Bourne, in memory of Reverend Will L. Cuninggim; the income to be used for scholarship aid, preference to be given to graduates of the Methodist Orphanage, Raleigh, N. C.

ROSE M. DAVIS SCHOLARSHIP FUND

Established 1941 by Dr. Rose M. Davis; the income to be used for scholarship aid.

JERE R. DOWNING SCHOLARSHIP FUND

Established 1936 by Mrs. Alice M. Downing and her son, J. Robert Downing, '35, as a memorial to their husband and father, Jere R. Downing of Kennebunk, Me.; the income to be used for scholarship aid, preference to be given to students from New England.

B. N. DUKE SCHOLARSHIP FUND

Established 1939 by bequest of Sarah P. Duke in memory of her husband, Benjamin N. Duke; comprised of one-half of the income earned by the bequest of Sarah P. Duke to the B. N. Duke Endowment Fund; to be used for scholarship aid to worthy and needy students of Duke University.

DUKE UNIVERSITY SUNDRY SCHOLARSHIPS

Gifts by miscellaneous donors for current use as scholarships.

EDGERTON SCHOLARSHIP FUND

Established in January, 1953 by Mr. N. E. Edgerton, '21, through the Duke University Development Campaign; the income to be used for scholarship aid to worthy students. Preference to be given to students from Wake County, North Carolina.

ENGINEERING SCHOLARSHIP FUND

Established by gifts of various persons; to be used for scholarship aid to engineering students.

WILLIAM P. FEW MEMORIAL SCHOLARSHIP

Established 1942 by gifts from various persons; to be used for scholarship aid to worthy students.

ARTHUR ELLIS FLOWERS SCHOLARSHIP

Established 1901 by Col. and Mrs. George W. Flowers, in memory of their son, Arthur Ellis Flowers; the income to be used for scholarship aid to worthy students.

GEORGE W. FLOWERS SCHOLARSHIP FUND

Established June 1927 by gift of Claude M. Flowers, '09, in memory of his father, Col. George W. Flowers, for many years a Trustee of Trinity College; the income to be used for scholarship aid to needy and worthy students.

ROBERT L. FLOWERS SCHOLARSHIP FUND

Established May 1939 by gift of R. L. Flowers; income to be used for scholarship aid to worthy students.

R. L. FLOWERS TRUST SCHOLARSHIP FUND

Established 1948 by bequest of Lily Parrish Flowers; the income to be used for scholarship aid for worthy students.

GENERAL UNIVERSITY SCHOLARSHIP FUND

Miscellaneous gifts from numerous persons; to be used currently for scholarship aid to worthy students.

GUILFORD COUNTY SCHOLARSHIP FUND

Established 1941 by miscellaneous gifts of several persons; the income to be used for scholarship aid to worthy students.

A. H. GWYN SCHOLARSHIP FUND

Established May 1941 by A. H. Gwyn, '18; the income to be used for scholarship aid to worthy students.

P. HUBER HANES SCHOLARSHIP FUND

Established 1939; consisting of $\frac{3}{5}$ of the income accruing annually to the P. Huber Hanes Fund; to be used for scholarship aid; one scholarship in the Divinity School; two scholarships to members of the families of alumni; and two general scholarships.

P. HUBER HANES, JR., SCHOLARSHIP FUND

Established 1939; consisting of $\frac{1}{5}$ of the income accruing annually to the P. Huber Hanes Fund; to be used for two scholarships for junior or senior students majoring in Business Administration.

J. WELSH HARRISS SCHOLARSHIP FUND

Established May 23, 1950 by gift of J. Welch Harriss, '28, and supplemented subsequently by additional gifts; the income to be used for scholarships to deserving young men from High Point, N. C., entering the Freshman Class of Trinity College.

B. D. HEATH SCHOLARSHIP FUND

Established 1903 by B.D. Heath; to be used for scholarship aid to worthy students from Union County, N. C.

HIGH POINT SCHOLARSHIP FUND

Established by gifts of members of the High Point Alumni Association, in connection with the celebration of the Centennial of Duke University; the income to be used for scholarship aid to students who are graduates of the High Point, N. C., High School.

JONES CHAIR OF ENGINEERING

Established 1951 by Edwin L. Jones, Sr., '12; Annabel Lambeth Jones, '12; Edwin L. Jones, Jr., '48; Lucille Finch Jones; and the J. A. Jones Construction Company in memory of James Addison Jones and Raymond A. Jones; the income to be used for a professorship and/or for scholarship aid to worthy and qualified students in the College of Engineering.

HUNTER JONES SCHOLARSHIP FUND

Established December 1947 by gift of Hunter Jones, '19, Durham, N. C.; the income therefrom to be used for scholarship aid to worthy students.

HENRY HARRISON JORDAN MEMORIAL SCHOLARSHIP FUND

Established December 1938 by gifts from George Way, B. Everett Jordan, '18, H. W. Jordan, Charles E. Jordan, '23, Mrs. H. C. Sprinkle, Jr., '24, and Frank B. Jordan, '27, in memory of their father, Reverend Henry Harrison Jordan, a member of the Western North Carolina Conference; the income to be used for scholarship aid to worthy students.

J. M. JUDD SCHOLARSHIP FUND

Established 1922 by J. M. Judd, '95, of Varina, N. C., with directions that the earnings be allowed to accumulate until such time as they are sufficient to provide a four-year tuition scholarship.

FRANK S. LAMBETH SCHOLARSHIP FUND

Established 1930 by bequest of Frank S. Lambeth, '80; the income to be used for scholarship aid to worthy students of Duke University.

D. M. LITAKER SCHOLARSHIP FUND

Established 1946 by gift of Charles H. Litaker, '28, in memory of his father, D. M. Litaker, '90, who for 47 years was an active minister in the Methodist Church; the income and, under certain conditions, a part of the corpus of the fund to be used for scholarship aid to undergraduate students, natives of the territory now embraced by the Western North Carolina Conference, who are preparing for the ministry.

MARY ELIZABETH DUKE LYON SCHOLARSHIP FUND

Established 1942 by Mary Washington Stagg, in memory of her mother, Mary Elizabeth Duke Lyon; the income to be used for scholarship aid to worthy students.

THE McALISTER SCHOLARSHIP FUND

Established December 1935 by Amelie McAlister Upshur in memory of her mother, Armatine Reynaud McAlister, and father, William Henry McAlister; the income to be used annually for a scholarship to one boy and one girl from each of the three states of North Carolina, South Carolina and Louisiana.

MCCRACKEN MEMORIAL SCHOLARSHIP FUND

Established 1945 by Thomas W. McCracken, '15; the income to be used for scholarship aid for worthy students.

J. H. MCCRACKEN MEMORIAL SCHOLARSHIP FUND

Established 1947 by J. H. McCracken, '22, and contributions from members of the First Methodist Church of Henderson, N. C., in memory of Reverend J. H. McCracken, '92, for many years a member of the North Carolina Conference; income to be used for scholarship aid.

THE O. G. B. McMULLAN SCHOLARSHIP FUND

Established 1913 by gift of O. G. B. McMullan of Elizabeth City, N. C.; the income to be used for scholarship aid to worthy students, preference to be given to residents of Perquimans and Pasquotank counties, N. C.

R. A. MAYER SCHOLARSHIP FUND

Established 1939 by gift of R. A. Mayer, '96, in memory of his father, Minor C. Mayer, and mother, Sarah R. Mayer, in connection with the Centennial celebration of Duke University, and supplemented subsequently by additional gifts; the income to be used for scholarship aid to worthy students, preference to be given to students from Mecklenburg County, N. C.

W. H. MOORE SCHOLARSHIP FUND

Established 1920 in memory of W. H. Moore, '71, by his wife, Mrs. W. H. Moore, and daughters, Mrs. W. E. Steele, Miss Maude Moore, Mrs. T. L. Parsons, Mrs. J. H. Ihrie, and Mrs. J. LeGrand Everett; the income to be used for scholarship aid to worthy students.

THOMAS R. MULLEN, JR., SCHOLARSHIP FUND

Established April 5, 1949, by gift of T. R. Mullen in memory of his son; the income to be used for scholarship aid to worthy young men and women.

J. A. ODELL SCHOLARSHIP FUND

Established 1897 by gift of James A. Odell; the income to be used for scholarship aid to worthy students.

J. M. ODELL SCHOLARSHIP FUND

Established 1897 by gift of J. M. Odell; the income to be used for scholarship aid to worthy students.

W. R. ODELL SCHOLARSHIP FUND

Established 1940 by gifts from Fred C. Odell, '02, Mrs. Ralph M. Odell, Arthur G. Odell, '06, and others, in memory of William R. Odell, '75, for more than 50 years a member of the Board of Trustees of Duke University; the income to be used for scholarship aid to worthy students.

HENRY A. PAGE SCHOLARSHIP FUND

Established January 1942 by gift of Henry A. Page, Jr., '07, and Gertrude Wetherill Page, in memory of his father, Henry A. Page, for many years a member of the Board of Trustees of Duke University; the income to be used for scholarship aid to worthy students, preferably those preparing for the study of medicine.

EDWARD JAMES PARRISH SCHOLARSHIP FUND

Established 1921 by Rosa Brown Parrish, in memory of her husband, Edward J. Parrish; the income to be used for scholarship aid to worthy students.

PHI BETA KAPPA COMMEMORATIVE SCHOLARSHIP FUND

Established 1950 in connection with the Duke Development Campaign to honor deceased faculty members of the Duke Chapter of Phi Beta Kappa.

JOHN T. RING SCHOLARSHIP FUND

Established 1919 by gift of S. G. Ring and family of Kernersville, N. C., in memory of John T. Ring, '16, who was killed in France during World War I; the income to be used for scholarship aid to worthy students.

T. V. ROCHELLE SCHOLARSHIP FUND

Established 1945 by T. V. Rochelle, '14, High Point, N. C., and supplemented annually; the income to be used for scholarship aid to a worthy and needy student who is a graduate of the High Point, N. C., High School.

JOSEPH H. SEPAK MEMORIAL SCHOLARSHIP FUND

Established 1950 by gifts from friends in memory of Joseph H. Separk, for many years a member of the Board of Trustees of Duke University; the income to be used for scholarship aid to worthy students, preference to be given to students from Gaston County, N. C.

J. RAYMOND SMITH SCHOLARSHIP FUND

Established 1939 by J. Raymond Smith, '17, Mt. Airy, N. C., in connection with the Centennial celebration of Duke University; the income to be used for scholarship aid to worthy students.

MARY ALYSE SMITH SCHOLARSHIP FUND

Established December 1946 by Mary Alyse Smith, '30, of Burlington, N. C., and her father, Marvin B. Smith, for scholarship aid to worthy North Carolina boys or girls.

WILLIS SMITH SCHOLARSHIP FUND

Established 1939 by Willis Smith, '10, and supplemented from time to time; the fund to be used for scholarship purposes.

THOMASVILLE SCHOLARSHIP FUND

Established 1940 by gifts of T. Austin Finch, '09, and J. Walter Lambeth, '16, by contributions made through the Centennial Fund; the income to be used for scholarship aid to worthy students.

MARY NEWBY TOMS SCHOLARSHIP FUND

Established 1906 by gift of Clinton W. Toms and supplemented from time to time by additional gifts; in May 1947, in connection with supplemental gifts to the Fund, it was established as a permanent endowment in memory of his wife, Mary Newby Toms; the income to be used for scholarship aid to worthy students, preference to be given to students from Durham and Perquimans counties, N. C.

UNDERGRADUATE SCHOLARSHIP FUND

Established 1950 to provide scholarship aid to deserving students in the undergraduate colleges of Duke University. In 1951 this fund was increased by the income from several Scholarship Funds which were not restricted in their use.

GEORGE W. WATTS SCHOLARSHIP FUND

Established 1897 by gift of George W. Watts; the income to be used for scholarship aid to worthy students.

WEATHERBY SCHOLARSHIP FUND

Established 1912 by C. E. Weatherby, Faison, N. C.; the income to be used for scholarship aid to worthy students.

WOMAN'S PANHELLENIC SCHOLARSHIP FUND

Established May 25, 1949, by gift of the Woman's College Panhellenic Association; income to be used for scholarship aid for a rising senior in the Woman's College of Duke University.

Loans

A number of loan funds have been established for the benefit of the students of Duke University. The most important and largest is the Angier B. Duke Memorial Student Loan Fund, which is administered through an advisory committee of officers of the University. The amount available to be loaned depends upon the income from investments and on the amount repaid on loans previously made to students. The same committee of officers administers the other endowed loan funds of the University.

The committee in approving loans selects those students who, from the standpoint of character, scholastic attainment, personality and degree of financial need, are deserving of consideration.

The following regulations govern the operation of the loan fund program:

1. No loan will be made to a student who violates any of the regulations of the University or whose academic record is not satisfactory to the faculty.

2. As a general policy, a student must have spent one semester in residence before he is eligible to apply for a loan. During this period the loan committee will have an opportunity to acquaint itself with the worth and need of the individual applicants.

3. Loans will be made only to students who are taking approved courses of study that lead to a degree, and all loans must be arranged for not later than one week after the beginning of a semester.

4. Every applicant for a loan must give the names of two references who will be approached by the student Loan Office. Statements from these references must have been received and made a part of the file before any money will be advanced. Neither of these references may be a member of a borrower's family.

5. Long term loans are customarily made to defray only the expenses incurred for tuition, fees, or room rent.

6. Interest on long-term student loans accrues at the rate of 1% from the date of each note and is payable during or before the week prior to the graduation exercise of each of the school years during which the borrower is enrolled at Duke University. After the student leaves the University permanently, the interest rate rises to 3% for the five year period required for payment. Any notes unpaid at the end of this five year period will bear interest at the rate of 6% until they are paid in full.

An extension of two years at the 1% interest rate is granted to those borrowers receiving a degree of Doctor of Medicine at Duke University. This extension covers the two year internship required of all medical students. An extension at the 1% interest rate is also granted to those borrowers who continue their study in other institutions of higher learning. Proper proof of residence must be submitted annually to the Student Loan Office. Extensions of this sort will be renewed from year to year and the maximum period of extension will depend upon particular circumstance of each student.

7. Applications for loans should be made to the Loan Committee, Office of the Secretary, Duke University. A formal application for loan assistance may be made only on forms furnished in the Secretary's Office during the first week of each semester. The granting or withholding of a loan is a matter entirely within the discretion of the loan committee. A student is expected to use all other possible means of securing financial assistance before applying for aid from the Loan Fund.

ALBERT ANDERSON LOAN FUND

Established by the will of the late Albert Anderson; to be used for loans to worthy and deserving young men and women of the Methodist faith.

ALUMNI LOAN FUND

Established 1915 by gift from the Alumni Association.

ANGIER B. DUKE MEMORIAL LOAN FUND

A charitable trust established during the year 1925 by B. N. Duke in memory of his son, Angier Buchanan Duke, for the stated purpose of assisting needy and worthy students in obtaining a college education.

PAUL M. BARRINGER BEQUEST FUND

Established 1932 by bequest from Paul M. Barringer; the income to be used in educating worthy young people; preference to be given those from Rowan County, N. C.

BYNUM BELOTE LOAN FUND

Established 1924 by E. T. Belote of Asheville, N. C., in memory of his son, Alfred Bynum Belote, student 1923-24.

A. D. BETTS LOAN FUND

Established 1919 by G. W. Vicks, '11, and wife, in memory of Reverend A. D. Betts, a member of the North Carolina Conference; other contributions by W. A. Betts and Mrs. L. P. Wilkins; to be used for the aid of young men preparing for the ministry.

FANNIE CARR BIVINS MEMORIAL FUND

Established 1928 by the Alumnae Association in memory of Fannie Carr Bivins, '96; income to be loaned to young women students upon the recommendation of the Alumnae Council and approval by the dean of the Woman's College.

CHRISTIAN EDUCATION LOAN FUND

Established 1921 as a part of the Christian Education movement in the Methodist Church in North Carolina; for use as a general loan fund.

CLASS OF 1902 LOAN FUND

Established 1932 by the members of the class at their 30th Anniversary Reunion.

JESSE A. CUNINGGIM LOAN FUND

Established 1896 by J. A. Cuninggim, '90; to be loaned to young men preparing for the ministry.

ALEXANDER EDENS MEMORIAL LOAN FUND

Established 1920 by Lacy T. Edens, '24, Cora R. Edens, John A. Edens, L. D. Edens, '15 and L. F. Edens, in memory of Alexander Edens.

GENERAL LOAN FUND

Established 1900 by the North Carolina Conference, and supplemented from time to time by additional contributions by both the North Carolina Conference and the Western North Carolina Conference; to be used for no other purpose than to aid worthy students of the University.

W. O. GOODE EDUCATIONAL LOAN FUND

Established 1923 by W. O. Goode of the Western North Carolina Conference.

MARY HESTER HAMBRICK LOAN FUND

Established 1925 by W. R. Hambrick, Haldah Satterfield, John Jackson Hambrick, '16, and Robert T. Hambrick, '19, in memory of Mary Hester Hambrick, wife and mother; loans to be made to any needy students, preferably from Person County, N. C.

B. D. HEATH LOAN FUND

Established 1921 by B. D. Heath of Charlotte, N. C.; income to be used for students preparing for the ministry, preference to be given to one student annually from Union County, N. C.

HOLLAND HOLTON MEMORIAL LOAN FUND

Established March 1948 by friends and former students in memory of Holland Holton, '07, Professor of Education and Director of the Summer School of Duke University for many years; to be used in helping worthy young men and women in securing a college education.

J. B. IVEY LOAN FUND

Established 1922 by J. B. Ivey of Charlotte, N. C.; to be used for loans for worthy students.

W. K. KELLOGG FOUNDATION LOAN FUND FOR NURSES

Established 1942 by gift of the W. K. Kellogg Foundation; to be used for loans to students in the School of Nursing.

MINISTERIAL EDUCATION LOAN FUND

Established 1915 by the North Carolina Conference of the Methodist Church; to be used for loans to students preparing for the ministry.

WILLIAM NEAL STUDENT AID FUND

Established 1920 by John W. Neal in memory of his son, William Neal, student in 1919; to be used for loans to worthy and needy students.

NORTH CAROLINA CONFERENCE BOARD OF CHRISTIAN EDUCATION LOAN FUND

Established 1931 by gift of the Board of Christian Education of the North Carolina Conference; to be used for loans to students preparing for the ministry or other distinctive type of Christian service.

W. N. REYNOLDS LOAN FUND

Established by the late W. N. Reynolds, '86, of Winston-Salem, N. C.; to be used for loans to boys and girls of North Carolina seeking an education at Duke University; preference, however, to be given to graduates of the Nancy Cox Reynolds Memorial School, and the sons of employees of the R. J. Reynolds Tobacco Company, regardless of residence. In the discretion of the Executive Committee and under certain conditions, scholarships may be provided from the income from the fund.

ROANOKE RAPIDS HIGH SCHOOL LOAN FUND

Established 1925 by the graduating class of the Roanoke Rapids High School, Roanoke Rapids, N. C.; to be used for loans to students who are graduates of that school.

ELLA WESCOTT TUTTLE LOAN FUND

Established 1923 by D. H. Tuttle, '80, in memory of his wife, Ella Wescott Tuttle; to be used for loans to worthy young women seeking an education at Duke University.

JOSHUA VICK MEMORIAL LOAN FUND

Established 1920 by Mrs. J. W. Vick in memory of her husband, Joshua Vick; to be used for loans to needy students.

WAKE COUNTY ALUMNAE LOAN FUND

Established 1924 by the Raleigh Chapter of the Alumnae Association; to be used for loans to worthy women students.

WINSTON-SALEM DISTRICT OF NORTH CAROLINA CONFERENCE LOAN FUND

Established 1923 by the Winston-Salem District of the Western North Carolina Conference of the Methodist Church; to be used for loans to students preparing for the ministry from the Winston-Salem District.

MARY POAGE WOOTEN LOAN FUND

Established 1922 by John C. Wooten, '98, in memory of his wife, Mary Poage Wooten; to be used for loans to worthy students.

Student Employment

Student employment offices are maintained to serve students who need part-time jobs. There are many opportunities both on the campus and in the city of Durham, and a considerable number of students each year help defray their college expenses by working.

Students may make application for part-time employment only after they have completed an application for admission and notification of acceptance has been given. The job application should be by letter prior to the reporting date for entrance, and a detailed job application form must be completed at the time of arrival at Duke University.

Those students in Trinity College and the College of Engineering in need of such employment may apply to Mr. J. M. Dozier, 217 Administration Building, West Campus. Students in the Woman's College should apply to the Assistant Dean of Undergraduate Women, 108 East Duke Building, East Campus.

Living Accommodations for Men

Craven, Crowell, Few and Kilgo Quadrangles on the West Campus are reserved for undergraduate men. The Quadrangles contain 33 Houses designated by letters of the alphabet from House A through House HH. The rooms are equipped as single and as double rooms. In some areas communicating doors between rooms provide suites for three or four persons. Kilgo Quadrangle is reserved for members of the Freshman Class.

Undergraduate men are required to live in the Residence Houses unless they are married, or are living with parents or relatives. Any exception must be approved by the Dean of Men.

The rental charge for a single room is \$175.00 for the academic year, or \$87.50 each semester. The rental charge for the double room is \$250.00 for the academic year, or \$125.00 for each occupant, or \$62.50 for each occupant each semester. Rooms are rented for no shorter period than one semester, or in case of a medical student, one quarter, unless by special arrangement with the Housing Bureau. A shorter period of occupancy without special arrangement will be charged a rate of \$1.00 per day with a minimum charge of \$25.00.

Room reservations are made with the Duke University Housing Bureau only after official acceptance for admission by the University. A \$25.00 room deposit is required from all Resident Hall applicants before reservation of room will be made. The initial room deposit is effective for the entire college course for the student whose attendance during regular terms is continuous. The room deposit will be refunded within thirty days after graduation upon the request of the student. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit is refundable provided the Housing Bureau is notified at least 60 days prior to the beginning of the semester for which the room is reserved. A resident student, in order to retain his room for the succeeding academic year, must make application at the office of the Housing Bureau for confirmation of the

reservation in accordance with the plan that is published during the school year.

The exchange of rooms may be arranged at the Housing Bureau within fifteen days after the official opening of the semester or quarter of the school term. Thereafter a charge of \$2.00 may be made. Persons exchanging rooms without the approval of the Housing Bureau will be subject to charges for both rooms.

The authorities of the University do not assume responsibility for the persons selected as roommates.* Each student is urged to select the roommate when the room is reserved.

Beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are furnished by the University. The student supplies linens, blankets and pillows. Rugs, if desired, are not to exceed 50 square feet in size.

Duke University desires to provide for its students a residential environment conducive to academic achievement, the development of high ideals, and sound character. The institution asks and believes that each student will contribute to this end by arranging his personal belongings in an orderly manner, by caring for the buildings and furniture as he would do in his own home, and by observing a code based on gentlemanly behavior in an educational environment which demands respect for all residents. Regulations governing the occupancy of rooms will be supplied directly from the Housing Bureau when the room reservations are made. Occupants are expected to abide by these regulations.

Living Accommodations for Women

Undergraduate women are required to live in Woman's College residence houses unless they are living with parents or close relatives in the City. Under special circumstances, in the case of a mature student, the Dean may make an exception.

A counselor, who is a member of the Dean's staff, lives in each dormitory. She serves as adviser to individual students and, in cooperation with the student House Council, is responsible for the administration of the house.

There are eight residence houses: Alspaugh, Aycock, Bassett, Brown, Giles, Jarvis, Pegram, and Southgate. All rooms in Jarvis and Southgate are double; in the other houses there are a few single rooms, and, with the exception of Aycock, a limited number of suites consisting of a double room and a single room.

Each occupant of a double room is charged \$150.00 for the school year or \$75.00 per semester; the occupant of a single room, \$200.00 for the school year or \$100.00 per semester. While rooms are rented for the full school year, unless special arrangements are made in ad-

vance with the Dean of Undergraduate Women, payment may be made by semester. A shorter period of occupancy than a semester without special arrangements will be charged at the rate of \$1.00 per day with a minimum charge of \$25.00.

Room reservations are made with the Woman's College Housing Bureau. An applicant who has been officially accepted may reserve a dormitory room by paying a room deposit fee of \$25.00. If this fee is not paid within ten days after she is notified of her acceptance, her admission is cancelled. The initial room deposit fee is effective for the entire college course of the student whose attendance during regular terms is continuous. It will be refunded within 30 days after her graduation. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit fee is refundable provided the Housing Bureau is notified at least sixty days prior to the beginning of the semester for which the room was reserved. Dormitory rooms are reserved by upperclass students in accordance with the plan that is published during the school year. All rooms which have not been reserved on or before the announced date will be considered vacant for the succeeding semester and will be assigned to others.

After a student has engaged a room, she is not permitted to move to another without the consent of the Woman's College Housing Bureau. A student leaving one room and occupying another without permission may be charged for both rooms for the entire semester. No student is allowed to rent or sublet her room to another occupant.

The Woman's College Housing Bureau selects a roommate for the new student who is assigned to a double room but has made no arrangements for a roommate. After a student has been in residence for one semester, however, she is responsible for obtaining and keeping a roommate if she continues to occupy a double room. If a student occupying a double room does not obtain a roommate within the time required—approximately two weeks after the beginning of the semester—she may be required to pay the rental consideration for the entire room.

Rooms are equipped with only the principal articles of furniture. The student provides her own linens, blankets, pillows, bedspreads, curtains, and lamps. She may supply additional articles such as scatter rugs and small tables or bookcases; but large rugs or overstuffed furniture, which make cleaning difficult, are prohibited.

Dining Service

The dining facilities on the West Campus include three cafeterias with multiple-choice menus, and the Oak Room where full meals and *a la carte* items are served. The cost for the academic year ranges

from \$375.00 to \$500.00 depending on the tastes of the individual. On the East Campus dining halls are located in the Union and in Southgate. Resident women may not board elsewhere than at these halls. The charge for board is \$200.00 per semester, payable at the time of registration.

In the Men's Graduate Center there is a cafeteria with multiple choice menus and a Coffee Lounge where sodas and sandwiches are served from 11:30 A.M. to 11:00 P.M. The prices in these dining rooms are the same as on the West Campus.

It is hoped that present rates may be maintained. Charges, however, are necessarily dependent on costs of labor, foods, and materials, and some adjustment may be necessary.

Due to the large number of those served in the dining halls, it is not possible to arrange special diets for individual students. Special diet for the sick is served in the infirmary.

The Libraries



THE UNIVERSITY LIBRARIES, with 1,125,450 volumes and 1,525,000 manuscripts, provide exceptional resources and facilities for study and research by undergraduate and graduate students, and by visiting scholars. Between 40,000 and 50,000 volumes are added annually, and 71 foreign and domestic newspapers and 3,923 periodicals are received currently. A large collection of microfilms of rare books, newspapers, and periodicals is available.

A Chemistry library (15,550 volumes), Physics-Mathematics library (16,100), and Biology-Forestry library (49,000) are housed for convenience of use in the buildings of these departments. The libraries of the Schools of Divinity (63,000), Law (101,300), Medicine (54,000) and of the College of Engineering (20,000), are also shelved in the buildings of these schools, all on the West Campus.

The General Library, centrally located on the West Campus, has 708,500 volumes in all other fields. It is the principal working and research collection for students in the humanities and social sciences. The collection has been developed with care to support the work of the undergraduate curriculum and the more specialized needs of graduate and post-doctoral research. Basic collections of source materials are supported by the important publications of criticism and discussion. There are large collections of general periodicals, of the publications of European Academies, and of public documents of state, federal, and foreign governments, and international organizations. The newspaper collection (about 13,000 volumes and 3,600 rolls of microfilm) is particularly strong in papers from the states of the Atlantic seaboard, both North and South, with extensive holdings of Ante-bellum and Civil War papers of North Carolina, South Carolina, and Virginia.

The manuscript collections, relating chiefly to the South Atlantic region with particular strength in the Confederate period, is most extensive in the field of history, but it contains important source material on all phases of social and economic life as well as politics. There are groups of manuscripts in American and British literature, with a notable Walt Whitman collection, and a number of important mediaeval manuscripts, chiefly lectionaries and copies of the New Testament. Among many special collections of note are the Guido Mazzoni library of Italian and comparative literature, the Lanson Collection of French literature, Goethe and Dante collections, collections on

Brazil, Peru, Ecuador, and the Philippines, the Holl Church history library, eighteenth-century English poetry and prose, a Socialist collection, the Arents tobacco collection, the Thomas collection of books on Chinese history and culture, the George Washington Flowers Collection of manuscripts, books, newspapers, and pamphlets dealing with all phases of Southern history, and the Trent collection of Walt Whitman books and manuscripts.

The General Library building, which was modernized and enlarged in 1949, contains many special features which contribute to the preservation of material and facilitate their use by students and research workers. The book stacks, manuscripts, and rare book storage and reading rooms are air-conditioned. Two hundred and fifty carrels, some completely enclosed, are available in the stacks as places of study for graduate students. Graduates and advanced students are permitted access to the stacks upon application. On the ground floor are a newspaper reading room with a battery of microfilm reading machines and a microphotography laboratory with facilities for reproducing printed and other material. On the same floor are the manuscripts reading room and storage area. The first floor has periodical, graduate, and undergraduate reading rooms, the latter opening into an attractively furnished small library for recreational reading. In the north wing is the rare book reading room, with adjoining special collections rooms and storage stacks. The second floor houses the general reference and reading room, the circulation department and Main Loan Desk, and the Public Card Catalog, a union catalog of books in all the University libraries. There is also a catalog of the library of the University of North Carolina at Chapel Hill, whose books are available through inter-library loan.

On the East Campus, the Woman's College Library, in its attractive Georgian building, contains 98,000 volumes in an open stack collection, chiefly those most constantly needed in the undergraduate work of women students. A reference and general reading room, the Thomas Memorial Room, and the Booklovers' Room, with open shelves of books for general reading, provide comfortable and attractive space for reading and study.

A "Student's Guide to the General Library" is available on request addressed to the Librarian of the University.

Reserve Officers Training Corps



THROUGH the Naval and Air Force Reserve Officers Training program the University is cooperating with the Department of Defense in the effort to provide a steady supply of well-educated officers for the active and reserve forces of the Nation.

The Naval Reserve Officers Training Corps

There are two basic programs through which students can qualify for Naval commissions upon graduation: one, the Regular Naval Reserve Officers Training Corps program, provides a maximum of four years in the University largely at government expense, followed by a temporary commission in the regular Navy or Marine Corps; the other, the Contract program, leads to a commission in the Naval Reserve or the U. S. Marine Corps Reserve.

The Regular Student—Scholarships are awarded on the basis of an annual nation-wide test and selection procedure. Students selected are appointed Midshipmen, USNR, and receive for a maximum of four years tuition, fees, and textbooks at government expense plus retainer pay at the rate of \$600 per year. The regular midshipman may take any course leading to a baccalaureate or higher degree with certain exceptions, e.g., pre-medicine and medicine, pre-theological and theological, music and art. His academic program must include 24 semester hours of naval science and a minimum of 3 semester hours of physics. In addition, 3 semester hours of trigonometry will be required if he has not previously completed such a course in a secondary school. The Regular goes on two summer training cruises aboard ship and receives aviation and amphibious indoctrination at naval shore stations the third summer.

Upon graduation he must accept a commission as Ensign, USN, or Second Lieutenant, USMC, if offered, after which he serves on active duty with the fleet for three years, if required by the Secretary of the Navy. Toward the end of the required active duty, he may request retention in the regular Navy or Marine Corps, or at his option be commissioned in the Reserve. Officers commissioned in the Reserve under such an option may be released to inactive duty except in times of national emergency.

The Contract Student—The contract student is selected from those regularly enrolled in Duke University who desire to qualify for a com-

mission in the Naval or Marine Corps Reserve while pursuing their normal courses of study. There is no restriction on the course of study which a contract student may pursue; nor is he required to take college physics while in the program. He must include in his academic program trigonometry (if not successfully completed in secondary school) and 24 semester hours of naval science. He has the status of a civilian who has entered into a mutual contract with the Navy and is not eligible for the benefits and retainer pay received by regular midshipmen. He is paid a subsistence allowance during his last two years in the NROTC, however, amounting currently to 90 cents per day. He goes aboard ship for one summer training cruise, normally between his junior and senior years. Upon graduation, he is commissioned in the Naval or Marine Corps Reserve and, if needed, reports for two years' sea service. Upon completion of the minimum active service requirements he may request transfer to the regular component of the Navy or Marine Corps, retention on active duty as a reservist, or transfer to the inactive reserve for a period of six years.

Both Regular and Contract midshipmen are deferred from Selective Service by virtue of their commitment to serve on active duty after graduation. The Navy furnishes necessary uniforms and equipment. Uniforms are worn only on drill days or other special occasions when prescribed by the Professor of Naval Science. Regular and Contract students receive the same instruction and wear the same uniforms. No distinction is made between the two, except in the handling of their records.

The Air Force Reserve Officers Training Corps

The unit functions as a regular department of instruction known as the Department of Air Science. It selects and trains students who possess the requisite character, intelligence, desire, and sense of duty to become Air Force officers.

For enrollment in the Basic Course (freshman and sophomore years) the student must: be a male citizen of the United States; be physically qualified under standards prescribed by the Air Force (due allowance will be made for defects which are correctible prior to the student's eligibility for appointment as a commissioned officer); be accepted by the institution as a regularly enrolled student; be not less than 14 years of age and not have reached 23 years of age at the time of enrollment; and successfully complete such general survey and screening tests as may be prescribed. Students initially entering the University who have had previous preparatory or high school military training are normally accepted in Basic Air Science at the same academic level as that in which they are accepted by the University.

For enrollment in the Advanced Course (junior and senior years)

the student must: have successfully completed the Basic Course or have had at least one year of honorable service in the Armed Forces of the United States; execute a written agreement with the government to complete the Advanced Course *and accept a commission in the United States Air Force Reserve*, contingent upon remaining in school, and to attend the Advanced Summer Camp at the time specified; not have reached 27 years of age at the time of initial enrollment in the Advanced Course; successfully complete such general survey and screening tests as may be prescribed; and be selected by the Professor of Air Science and Tactics and the appropriate authority of the University.

All uniforms, texts, and training equipment required for the Air Science Course are furnished at government expense, and students are paid a total of approximately \$600.00 for the two years of the Advanced Course.

Since the primary need of the Air Force is for flying officers, the great majority of students selected for Advanced Air Science must be physically qualified and desirous of applying for flying training after graduation. Upon graduation and completion of the Advanced Course, selected students will be offered commissions as Second Lieutenants in the Air Force Reserve. Reserve Officers who desire lifetime careers in the Regular Air Force may apply for regular commissions after serving on active duty for one year.

Students in the Basic Course may be deferred from Selective Service upon satisfactory completion of one semester of Basic Air Science. Advanced students are eligible for deferment as soon as they are enrolled formally in the Advanced Course. Selection for deferment is made by a board composed of representatives from the AFROTC and the University.

The Bureau of Testing and Guidance



THE UNIVERSITY maintains a Bureau of Testing and Guidance which provides a centralized program of educational, vocational, and personal counseling for students. In addition, the Bureau administers special group testing programs for University schools and departments and serves as the local testing center for a wide variety of national testing programs. The Bureau also carries on programs of research in the field of measurement and counseling. Although the counseling, testing, and research services of the Bureau are designed primarily to meet the needs of the students, the faculty, and the staff

of Duke University, these services are made available to individuals and organizations outside the University as its facilities permit. Requests for further information should be addressed to the Director, Bureau of Testing and Guidance, Duke Station, Durham, N. C.

Appointments Office



THE APPOINTMENTS OFFICE is a service agency designed to aid graduates in solving the problem of post-college employment. Its primary function is to serve as an intermediatry between students and prospective employers. It acquaints students with possibilities in business and professional fields; it assembles comprehensive records on each registrant and makes these records available to appropriate representatives; and it arranges interviews with prospective employers. The data assembled for individual records include academic achievement, training, experience, extracurricular activities, and honors. On occasion additional information of a specialized nature is secured. Confidential letters of recommendation are incorporated in the file of each registrant. The Office initiates contacts for students or cooperates with students who make contacts through personal efforts or through various departments of the University. It aids the registrant in directing his search to a field appropriate to his aptitude, training, and interest.

There are two major divisions of the Office: the Commercial Division, which handles all matters involving contacts with business and professional areas not related to formal education; and the Educational Division, which concerns itself with teaching and school administration positions at all levels. Students and alumni may register with either or both of these divisions.

The Office receives more calls for qualified personnel than it can supply from its registrants. It is to the mutual advantage of the students and the Office that a complete record of registrants be assembled by the fall of the senior year.

The Summer Session



THE SUMMER SESSION at Duke University makes available to Duke undergraduate students and to undergraduates from other universities and colleges a notable program of instruction in many fields of knowledge both academic and professional.

Undergraduates in Duke University who desire to accelerate their programs may complete the work for a degree in three years by attending two and one-half summer sessions.

Undergraduates from other colleges and universities may enjoy the special advantages of summer instruction at Duke and transfer their earned credits to their own institutions.

The Summer Session of 1954, will include two six-week terms: Term I, June 9 to July 17; Term II, July 20 to August 27. By attending both terms it is possible for a student to earn as many as twelve semester hours of credit.

Instruction of interest to undergraduates will be offered in the summer of 1954 in the following departments and colleges: Aesthetics, Art, and Music; Botany; Chemistry; Economics; Education; Nursing Education; English; Forestry; French; Geology; German; Greek; Health and Physical Education; History; Latin and Roman Studies; Mathematics; Philosophy; Physics; Political Science; Psychology; Religion; Sociology; Spanish; and Zoology.

Distinctive features of Summer Session instruction are provided by the program in marine biology offered at the Duke Marine Laboratory, Beaufort, N. C., and by the School of Spanish Studies held on West Campus. The School of Spanish Studies (1954 will be its thirteenth session) offers unusual opportunities to students both undergraduate and graduate who seek proficiency in the active use of the language. Students and faculty live and board in the Residence and share in a Hispanic social program. Among the faculty are native professors and native student assistants. Everyone speaks Spanish. Courses are offered concurrently on the undergraduate and the senior-graduate level so that the student while acquiring oral facility in everyday living may also satisfy course requirements toward a degree.

While the basic purpose of the Summer Session is to serve the academic and the professional requirements of those who are interested in their own educational advancement, the University recognizes the need of, and provides for, a varied recreation program both athletic and social.

Undergraduates of Duke University both men and women who plan to attend the Summer Session should enroll with the Dean of their own college in Duke University. Undergraduates in other universities or colleges who seek transfer credits should apply directly to the Director of the Summer Session, Duke University, Durham, N. C.

Registration and Academic Regulations



ORIENTATION PROGRAM: All freshmen and transfer students are required to participate in the Activities of Orientation Week. The program includes general ability, achievement, and placement tests, orientation lectures, physical examinations, social events, special religious services, registration, and enrollment.

The University considers the planning of a course of study to be of primary importance. Perhaps the most significant moments of Orientation Week, therefore, are those which a new student spends with his faculty adviser. With the results of the several tests which all freshmen take available to them, the adviser and the student plan a course of study adapted to the ability, achievements, and goals of the individual student. New students who miss the whole or a part of the Orientation Program place themselves at a serious disadvantage at the very outset of their college career.

MATRICULATION AND REGISTRATION: Students in residence are required to submit to the appropriate dean, not later than the date of the spring registration, cards showing their selection of courses for the following year. An advance deposit of \$25.00 is required before the card may be submitted. These cards, approved by the dean, are filed for permanent record in the dean's office. Students who do not select their courses for the following year at the time appointed must pay a fee of \$5.00 to the Treasurer of the University before their course cards may be approved for the fall. Students whose course cards have been approved in the spring may matriculate by mail during the summer. The same regulations, with the exception of the advance deposit, apply to registration for the spring semester.

Students who register in either semester at a date later than that prescribed in the calendar of this Bulletin must pay to the Treasurer a fee of \$5.00. They are counted as absent in the work they have missed in the courses to which they are admitted, and these absences carry the same penalty as do other absences from the course. Changes in courses for reasons not arising within the University require a payment of \$1.00 for each change made. No course may be elected later than two weeks after the opening of the semester, and no student may be admitted to any class without an enrollment card.

General Academic Regulations

QUANTITY CREDIT AND COURSE LOAD: The term of credit used is the semester hour which signifies one recitation a week throughout the semester. Two or three hours of laboratory work are equivalent to one hour of class work. Two semesters of seventeen weeks each constitute the academic year. For the degree of Bachelor of Arts or Bachelor of Science, credit for 124 semester hours is required; for a degree in Engineering, 148 semester hours.

The normal load of an undergraduate student in the Colleges of Arts and Sciences is five academic courses totaling 14 to 17 semester hours. The maximum number permitted is 19 semester hours, exclusive of physical education. In the College of Engineering the normal load is 18 semester hours exclusive of physical education. No student is permitted to take less than 14 semester hours of work without special permission from the dean or to take more than the normal load of work unless his average grade in the preceding semester is higher than C.

QUALITY CREDIT: The requirements for the degree are computed not only in semester hours but also in quality points. Quality points are earned by a student on the basis of his grades: for an A he receives three quality points for each semester hour; for a B, two quality points for each semester hour; for a C, one quality point for each semester hour; for a D, no quality points; for an F, a loss of one quality point for each semester hour. (In the College of Engineering no loss is incurred by a grade of F.) Credit for at least 124 quality points is required for the degree of Bachelor of Arts or Bachelor of Science, and at least 148 quality points for a degree in Engineering.

CLASS STANDING: In the Colleges of Arts and Sciences a student to rank as a sophomore must have to his credit at least 26 semester hours and 26 quality points; as a junior, at least 56 semester hours and 56 quality points; and as a senior, at least 92 semester hours and 92 quality points. In the College of Engineering he must have, respectively, at least 30 semester hours and 30 quality points; 68 semester hours and 68 quality points; and 106 semester hours and 106 quality points.

In the Colleges of Arts and Sciences a senior may not take for graduation credit any course open primarily to freshmen; and a junior may take for graduation credit no more than one course open primarily to freshmen. A list of these courses is published in the *Bulletin* under "Courses of Instruction."

A student of the senior class, irrespective of his average grade in preceding years, must, in order to be eligible for graduation, complete the work of his senior year with a minimum average grade of C. A senior who lacks not more than 9 hours at the beginning of the last

semester of his senior year may, with the approval of the Dean of the Graduate School, register for a maximum of 6 semester hours of graduate credit.

A tentative list of all candidates for the Bachelor's degree is prepared under the supervision of the dean as early in the college year as possible. A copy is furnished to each department of instruction for information and reference, and a copy is posted on the official bulletin board of the University for the information of the students concerned.

RESIDENCE REQUIREMENTS: A minimum of 30 semester hours of senior-level work in the Colleges of Arts and Sciences and 36 in the College of Engineering must be earned in residence. Students who meet this requirement but who still lack 6 to 8 semester hours in final fulfillment of requirements may take this work in another institution of approved standing, provided the course is approved by the head of the department concerned and by the dean.

A student who completes in a summer session the work required by the University for the Bachelor's degree will be granted the degree at the end of the summer.

GRADING ATTENDANCE, REPORTS, DISMISSAL, AND EXAMINATIONS:

GRADING: Grades are reported so as to indicate one of four things:

(1) *Passed.* A, B, C, and D are all passing grades. The letters are intended to indicate the following quality of work: A, exceptional; B, superior; C, medium; D, inferior.

(2) *Failed.* A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class.

(3) *Incomplete.* (a) A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. (b) Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

(4) *Absent from final examination.* (a) The grade X indicates that the student was absent from the regularly scheduled examination. (b) A student absent from examination, if the absence has been excused by the dean of the college, may receive an examination upon the payment of a fee of \$3.00 to the Treasurer of the University. The instructor concerned arranges for the examination in cases where absences are excused. (c) A student with an X grade who has not obtained a passing grade before the end of the semester following that in which the X was incurred is regarded as having failed in the course concerned and must repeat the work in class in order to receive credit. (d) If a student's absence from an examination is not excused by the

dean of the college, his grade for the course concerned is recorded as F.

If a student drops a course without permission from the dean, the grade for that course is recorded as F. If he drops with permission a course in which he is failing, the grade for that course is recorded as F unless, in the judgment of the dean, circumstances do not justify this penalty.

ATTENDANCE: Regular and punctual attendance in class work is expected of all students. Weekly reports of all absences from classes are made by each instructor and filed in the dean's office. No instructor has the authority to excuse a student from class attendance; it is his duty to report all absences and tardies. The first three tardies in a given course are counted as one absence. Thereafter, each additional tardy is counted as one additional absence.

One unexcused absence per semester hour without penalty is allowed for personal obligations. Sophomores, juniors, and seniors who in a normal schedule make averages of B or above in the preceding semester will be allowed two absences per semester hour for personal obligations, but will in all other respects be subject to the same regulations as other students.

Absences due to illness when certified by a proper medical official will be excused. Absences due to authorized representation of the University may be excused. Officials in charge of groups representing the University are required to submit names of those persons to be excused to the appropriate dean's office forty-eight hours in advance of the hour when their absences are to commence. Absences due to individual and personal reasons will not be excused.

All absences immediately before and after announced holidays are counted as double absences. Such double absences commence at the hour the student leaves the campus before the holiday and are counted as double until the student arrives at his first class after the holiday. Absences at the beginning of each semester are also counted as double. Unexcused, consecutive absences, whether excessive or not, result in the loss of quality points as in the case of unexcused, excessive absences. Each excessive or consecutive absence results in the loss of quality points as follows: one quality point for the first absence, two additional for the second, and three additional for the third. When the third unexcused, excessive or consecutive absence occurs, the student is debarred from the course with a loss of six quality points and an F in the course. When the student has taken twelve absences, excused and unexcused, in any course he is required to drop the course unless the instructor and the dean concerned grant special permission for him to continue in the course.

When a student's course load is reduced, due to excessive absences, to less than 12 semester hours, he is required to withdraw from the University.

REPORTS: Reports on class attendance and proficiency in academic work are sent to parents or guardians after the examinations at the end of each semester. In addition, reports on freshmen are mailed at each mid-semester period.

DISMISSAL: A student of the freshman class to remain in the University must pass at least 6 semester hours of work in his first semester and 18 semester hours in his first year. All other students must pass at least 9 semester hours each semester. The University may require a student whose record is considered unsatisfactory to withdraw, although he has met the minimum requirements set forth in this paragraph.

EXAMINATIONS: Final examinations are held in all subjects in January and May.

DEFICIENCIES IN COMPOSITION: The following regulations have been adopted by the Faculty:

1. Any student who must take English 1 and whose score in the English placement test indicates that he is not yet ready for English 1 must earn a passing grade in English L before being permitted to enter English 1.

2. In the fall of the junior year every student of Trinity College and of the Woman's College must take an examination in English usage. The regulation does not apply to students of the College of Engineering, which has special course requirements in English composition in addition to English 1-2. Students with irregular schedules resulting from acceleration or transfer to Duke after the fall of their junior year should take the examination in the fall of the year most nearly approximating the fifth semester. In any event, all students must take this examination; it is a requirement for graduation. If it is not taken in the junior year, it must be taken the succeeding fall, or at such other time as may be designated by the appropriate authorities of the University. Students who are proved deficient by this examination will be required to complete satisfactorily a special non-credit laboratory course in remedial English.

3. Whenever the work of a student in any course is unsatisfactory because of errors in English, the instructor may report the student to the dean, who will require him to enroll in remedial English until, in the opinion of the director of the Remedial Laboratory, the deficiency is removed.

4. All instructors are requested to advise their students each semester concerning this regulation.



The School of Medicine

(from an etching by Louis Orr)

The tower entrance of the School of Medicine faces in upon the central quadrangles of the University Campus. Behind it are the classrooms and laboratories of the School and 600-bed Duke Hospital, which provides outstanding training facilities for medical students. Typical of all Duke graduate and professional schools, as well as the undergraduate colleges, the School of Medicine emphasizes quality rather than size.

Requirements for Degrees



DUKE UNIVERSITY offers, in Trinity College, the Woman's College, and the College of Engineering, courses of study which lead to the degrees of: Bachelor of Arts; Bachelor of Science; Bachelor of Science in Civil, Electrical, or Mechanical Engineering; and Bachelor of Science in Nursing Education.

Bachelor of Arts

The requirements for the degree of Bachelor of Arts are based on the principle that the student will derive the maximum benefit from his college work if his program includes a broad distribution of studies among representative fields of culture, concentration within a special field, and some work of his own choice.

For graduation with the degree of Bachelor of Arts, the following course work must be completed in accordance with the academic regulations as stated in this Bulletin.

UNIFORM COURSE REQUIREMENTS	S.H.
English	6
Foreign Language	6-18
Natural Science	11
Religion	6
Social Science and History	12
Literature, Music, Art, and Philosophy	6
Physical Education	4
MAJOR AND RELATED WORK	42
ELECTIVES TO MAKE A TOTAL OF	124

These requirements are described in detail below. Descriptions of courses can be found under "Courses of Instruction, Trinity College and the Woman's College."

ENGLISH, 6 s.h.—This requirement is met by the completion of English 1-2. Students who demonstrate proficiency in English usage may be allowed to substitute 55 or 56 for English 1.

FOREIGN LANGUAGE, 6 to 18 s.h.—This requirement is met by the completion of the third college year of a foreign language. The languages which meet this requirement are French, German, Greek, Latin, and Spanish. The number of courses required depends on previous training and ability as shown on placement tests. Students presenting for entrance four units of Latin may satisfy the language requirement by the completion of the third college year of Latin or by two years of Greek. In exceptional cases, on the recommendation of the language department concerned and with the approval of the dean, a student who has completed the second college year of one language may satisfy the requirement by the completion of the first year of another language.

NATURAL SCIENCE, 11 s.h.—To satisfy this requirement a student must complete a laboratory course (8 s.h.) in one of the natural sciences (botany, chemistry, geology, physics, zoology), and one course of at least 3 semester hours selected from mathematics (except Mathematics 1), logic and scientific methodology (Philosophy 48 and 104), or from the sciences listed above.

RELIGION, 6 s.h.—To meet this requirement 6 semester hours must be chosen from Religion 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

SOCIAL SCIENCE AND HISTORY, 12 s.h.—(a) Students who present for entrance two acceptable units of history can satisfy this requirement by 12 semester hours chosen from History 1-2, or 51-52; Economics 51-52; Education 84, 105; Political Science 11-12, or 61-62, or 63-64; Psychology 91 to be followed, if desired, by either Psychology 100 or 101; or Sociology 91-92. Six of the 12 semester hours must be taken in economics, history, political science, or sociology. (b) Students who do not present for entrance two acceptable units of history must take History 1-2, or 51-52, and 6 semester hours selected from the other social sciences named in (a).

LITERATURE, MUSIC, ART, AND PHILOSOPHY, 6 s.h.—This requirement can be satisfied by a total of 6 semester hours in courses in English or American literature, foreign literature courses numbered above 100, literature courses in translation, courses in aesthetics, art, music, and courses in Philosophy except 48, 103, 104, 109, 199.

PHYSICAL EDUCATION, 4 s.h.—In Trinity College physical education is required during each of the first two years and is normally completed by the end of the sophomore year; in the Woman's College it is required during the first three years and is normally completed by the end of the junior year.

MAJOR AND RELATED WORK, 42 s.h.—Prior to registration in the spring of his sophomore year, each student is required to choose his major field and confer with his departmental adviser on the requirements for major and related work.

The major work consists of 18 to 24 semester hours in one department above the introductory courses. Introductory courses may consist of two one-semester courses in all departments except the Departments of German, Latin, and Romance Languages where the introductory courses may consist of four one-semester courses. The choice of courses must be approved by the major department. The related work must be taken in at least two other departments and is selected subject to the approval of the major department and the dean; it may not include more than one course of 6 or 8 semester hours open primarily to freshmen. Courses satisfying the uniform course requirements may also be counted toward the requirements in major and related work. Information on specific departmental requirements for major and related work can be found at the end of the department offerings in the section "Courses of Instruction." Several programs of study designed as preparation for professions are given in the section below entitled "Choice of a Major Field."

The total amount of work that a student may take in any one department toward the Bachelor of Arts degree is limited to a maximum of 36 semester hours. In the Department of Aesthetics, Art, and Music, and the Department of Philosophy, the Department of English, the Department of Economics, Accounting and Business Administration, and the Department of Romance Languages, a total of 54 semester hours is permitted, provided a total of not more than 36 semester hours is taken in any one division of the department.

ELECTIVES.—In addition to the uniform courses required and the major and related work, other courses must be completed to make a total of at least 124 semester hours, including 4 semester hours of physical education.

Students whose courses of study permit may elect a maximum of 18 semester hours in engineering, forestry, or medical science. The courses elected in these subjects must be approved by the major department and the dean of the college.

CHOICE OF A MAJOR FIELD

The requirement of 42 semester hours distributed, as specified above, between a major field and related work is based primarily on

the belief that some advanced study in one subject, together with work in allied subjects, is a valuable part of a general education. The selection of a major field usually depends on a student's cultural or vocational interests.

GENERAL PROGRAM

The General Program is designed for the student whose primary interest is in one of the liberal arts subjects. The subjects in which major work is offered are: art, botany, chemistry, economics, education, English, French, geology, German, Greek, history, Latin, mathematics, music, philosophy, physics, political science, psychology, religion, sociology, Spanish, zoology.

SPECIALIZED PROGRAMS

The student who has chosen a vocation may wish to include specialized training in his program. The following programs of study in preparation for various professions or professional schools are outlined for the guidance of the student.

BUSINESS: The student who plans to enter business may elect, in addition to the uniform course requirements, the following courses to satisfy the requirements for the Bachelor of Arts degree.

- Freshman Year: Economics 11 (recommended but not required).
Mathematics 5 (recommended but not required).
- Sophomore Year: Economics 51-52, Economics 57-58
- Junior Year: Economics 105, Economics 138, Economics 143, Economics 168, Economics 181, and one course selected from the following: Economics 144, Economics 147, Economics 158, Economics 182.
- Senior Year: Economics 153, Economics 188, Economics 191, and one course selected from the Economics group numbered above 100.

ACCOUNTING: A student who plans to qualify to take the Certified Public Accountant's examination should elect the following courses of study:

- Freshman Year: Economics 57-58 (may be taken at this time with the permission of the department).
- Sophomore Year: Mathematics 5 and 16 (recommended but not required).
Economics 51-52, Economics 171-172.
- Junior Year: Economics 143, Economics 153, Economics 173-174, Economics 181, 182.
- Senior Year: Economics 144 or Economics 184, Economics 275-276, and two courses from the following: Economics 175-176, Economics 177, Economics 178, Economics 180.

A student who does not take Economics 57-58 in the Freshman Year must take the course in the Sophomore Year and must make the necessary adjustments in the sequence of subsequent accounting courses.

Students majoring in accounting are urged to familiarize themselves

with the educational requirements of the State in which they expect to practice.

RELIGIOUS WORK: A student who plans to enter the ministry or other religious work should have a broad liberal arts training. He may major in religion or any other subject. It is suggested that the student include in his program as many as possible of the following courses.

Freshman Year: Religion 1-2, History 1-2.

Sophomore Year: Religion (6 s.h.), Economics 51-52 or Political Science 61-62, English Literature (6 s.h.).

Junior Year: Religion (6 s.h.), Psychology 91, English 151-152.

Senior Year: Religion (6 s.h.), Sociology (6 s.h.), Philosophy (6 s.h.).

SOCIAL WORK: The student who plans to pursue professional studies in preparation for social work (such as family welfare, child welfare, public welfare, probation and parole, and similar forms of neighborhood and community work) should take his major work in sociology, with related work in other social sciences. The following courses should be included:

History 1-2, or 51-52
Economics 51-52.
Political Science 61-62.
Psychology 91.
Philosophy (6 s.h.).

Zoology is recommended for the required course in Natural Science. Electives should be chosen mainly from history, economics, political science, education, sociology, philosophy, psychology, or religion.

TEACHING: The program for students who intend to teach is designed to prepare for positions both in the elementary school and in the high school. All prospective teachers, regardless of the type of school in which they expect to teach, (a) must take a sequence of four basic courses in the Department of Education, namely, Education 84, 88, 103, and 118; (b) should read carefully the certification requirements of the state in which they plan to teach and should arrange their programs with their departmental adviser accordingly; and (c) should begin early the required sequence of courses in education, taking Education 84, preferably during the sophomore year and Education 88 during the junior year.

HIGH-SCHOOL TEACHING. Students may meet certification requirements by qualifying in one teaching subject, but they are strongly advised to choose their electives to meet requirements in two teaching subjects. In any case their programs must include courses in education and in other subjects sufficient to satisfy the certification requirements of the state in which they will teach. Courses in materials and methods should be taken during the junior year; and courses in observation and practice teaching may be taken *only* in the senior year.

ELEMENTARY SCHOOL TEACHING. Students preparing to teach in the elementary school must complete the following specific requirements: Education 101-102, 142, and 161, History 91-92, and Political Science 11-12, or 63, or 61-62, Economics 115, Economics 109, or 118, or 120, Music 151, Physical Education 102, and Health Education 112. Education 101-102 (which includes observation and practice teaching) should be reserved for the senior year.

PREPARATION FOR GRADUATE SCHOOL: The student who plans to enter a graduate school of arts and sciences for advanced study should consult an adviser in the field of the proposed advanced study concerning suitable preparation. Most graduate schools have definite requirements in foreign languages for all students. Candidates for the degree of Doctor of Philosophy are required to pass reading examinations, usually in German and French. In some cases other languages may be substituted. As soon as practicable, the student should ascertain the requirements of the particular graduate school he desires to enter.

PREPARATION FOR LAW SCHOOL: Students who plan to study law may select their major work in any field. The following courses are recommended:

Economics 51-52, 57-58.
 English 55-56.
 History 1-2 or 51-52, 105-106.
 Philosophy 48 and 91.
 Political Science 61-62.
 Sociology 91-92.

PREPARATION FOR MEDICAL OR DENTAL SCHOOL:

Students planning to enter a medical or dental school should plan their programs of study from the first semester so as to include those courses required by the Medical Schools of their choice. Foundation courses for the study of medicine usually include: Chemistry 1-2, 61, 151-152; English 55-56; Mathematics 5, 6; Physics 51-52; and Zoology 1-2, 53.

Special advisers are available for pre-medical and pre-dental students. The names of these advisers may be secured at the dean's office.

Bachelor of Science

For graduation with the degree of Bachelor of Science, the following course work must be completed in accordance with the academic regulations as stated in this Bulletin.

UNIFORM COURSE REQUIREMENTS	S.H.
English	6
French and German (second college year)	12-24
Mathematics	6
Natural Science	8

Economics, History, or Political Science	6
Religion	6
Restricted Elective	6
Physical Education	4
MAJOR AND RELATED WORK	48
ELECTIVES TO MAKE A TOTAL OF	124

These requirements are described below. Description of courses can be found under "Courses of Instruction, Trinity College and the Woman's College."

ENGLISH, 6 s.h.—This requirement is met by the completion of English 1 and 2. Students who demonstrate proficiency in English usage may be allowed to substitute English 55 or 56 for English I.

FRENCH AND GERMAN.—Bachelor of Science candidates must normally complete at least the second college year, or equivalent as determined by examination, of both French and German. In special cases, with the permission of the major department and the dean, this requirement may be met by completing the third year of French or German.

MATHEMATICS, 6 s.h.—This requirement may be met by completion of Mathematics 5 and 6.

NATURAL SCIENCE, 8 s.h.—This requirement can be satisfied by courses in one of the natural sciences, namely, botany, chemistry, geology, physics, and zoology. The courses must include laboratory work, and may not be counted as part of the major or related work.

SOCIAL SCIENCE AND HISTORY, 6 s.h.—A student who does not present for entrance two acceptable units of history (exclusive of other social studies) must take a course in history; otherwise, he has his choice of economics, history, or political science.

RELIGION, 6 s.h.—To meet this requirement 6 semester hours must be chosen from Religion 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

RESTRICTED ELECTIVE, 6 s.h.—To meet this requirement 6 semester hours in addition to other uniform course requirements must be selected from aesthetics, art, economics, education, English, foreign language, history, music, philosophy, political science, religion, and sociology.

MAJOR AND RELATED WORK, 48 s.h.—Major and related work consists of 48 semester hours in the Natural Sciences. This work must be selected from the departments of botany, chemistry, geology, mathematics, physics, psychology, and zoology. The major work consists of not less than 24 semester hours in one department, the choice of courses being subject to the approval of the department. The major work does not include courses primarily open to freshmen. The related work is taken in at least two other departments and is selected subject to the approval of the major department. It may not include more than one course primarily open to freshmen. A minimum of 14 semester hours of related work is required, 8 hours of which must be in laboratory science. Further information concerning the requirements for the major and related work in the various departments will be found at the end of the department offerings in the section "Courses of Instruction."

ELECTIVES.—In addition to the above, the student must elect sufficient courses to complete, with an average grade of "C," the 124 semester hours necessary for graduation.

Students whose courses of study permit may elect a maximum of 18 semester hours in engineering, forestry, or medical science. The courses elected in these subjects must be approved by the major department and the dean of the college.

The total amount of work that a student may take in any one department toward the Bachelor of Science degree is limited to a maximum of 40 semester hours.

On or before the date announced for the spring registration, every sophomore in this group should select his major department in the Natural Sciences and arrange, under the guidance of an adviser in the major department, his program of studies for the following year. He should obtain the adviser's written approval of all courses selected in the division before submitting his program to the dean for final action. In like manner, each upperclassman will recheck the courses in his division of concentration each year with a representative of his major department.

Bachelor of Science in Civil, Electrical, or Mechanical Engineering

The studies for degrees in Engineering, designed for students who are preparing for civil, electrical, or mechanical engineering as a profession, lead to the following degrees: B.S. in C.E., B.S. in E.E., and B.S. in M.E. All curricula of the College of Engineering are fully accredited by the Engineers' Council for professional development.

GROUPS OF STUDIES FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL, ELECTRICAL, OR MECHANICAL ENGINEERING

See the *Bulletin of the College of Engineering* for courses substituted by Air ROTC and Naval ROTC students in the following curricula:

Uniform Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 5	College Algebra	3	Math 50	Analytic Geometry	3
Math 6	Trigonometry	3	Math 51	Calculus I	3
Chem 1	Chemistry	4	Chem 2	Chemistry	4
Engl 1	English	3	Engl 2	English	3
Hist E1	History	3	Hist E2	History	3
GE 1	Drawing	2	GE 2	Descriptive Geometry	2
	Physical Education	1		Physical Education	1
		19			19

GROUP ONE CIVIL ENGINEERING *Sophomore Year*

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	GE 107	Strength of Materials	3
CE 61	Surveying	4	CE 62	Surveying	4
	Physical Education	1		Physical Education	1
		19			19

Junior Year

FIRST SEMESTER

	S.H.
Engl E93 Advanced Composition	3
GE 58 Dynamics	3
CE 131 Structures	5
CE 113 Route Surveying	3
EE 123 Electric Circuits	4
	—

18

SECOND SEMESTER

	S.H.
Engl 151 Public Speaking	3
GE 128 Hydraulics	3
CE 132 Structures	5
CE 118 Materials	3
EE 124 Electric Machinery	4
	—

18

Senior Year

FIRST SEMESTER

	S.H.
CE 123 Water Supply	4
CE 135 Soils	3
CE 133 Reinforced Concrete	4
ME 103 Heat Power	3
ME 115 Mech. Eng. Laboratory	1
Approved Free Electives	3
	—

18

SECOND SEMESTER

	S.H.
CE 124 Water Purification	3
CE 116 Highways	3
CE 140 Indeterminate Structures	3
ME 104 Heat Power	3
ME 116 Mech. Eng. Laboratory	1
Approved Free Electives	5
	—

18

GROUP TWO

ELECTRICAL ENGINEERING

Sophomore Year

FIRST SEMESTER

	S.H.
Math 52 Calculus II	3
Phys 51 Physics	5
Econ 51 Economics	3
GE 57 Statics	3
EE 51 Survey—Electrical Engineering	1
Engl E93 Advanced Composition	3
Physical Education	1
	—

19

SECOND SEMESTER

	S.H.
Math 53 Calculus III	3
Phys 52 Physics	5
Econ 52 Economics	3
ME 52 Kinetics—Mechanism	4
EE 52 Fields	3
Physical Education	1
	—

19

Junior Year

FIRST SEMESTER

	S.H.
EE 101 Circuits	3
EE 107 Circuits Laboratory	1
EE 105 Measurements	4
Math 131 Differential Equations	3
ME 103 Heat Power	3
ME 115 Mech. Eng. Laboratory	1
GE 128 Hydraulics	3
	—

18

SECOND SEMESTER

	S.H.
EE 102 Circuits	3
EE 108 Circuits Laboratory	1
EE 106 Electronics	4
EE 148 D-C Machinery	3
ME 104 Heat Power	3
ME 116 Mech. Eng. Laboratory	1
Engl 151 Public Speaking	3
	—

18

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
EE 257	A-C Machinery	3	EE 258	A-C Machinery	3
EE 163	Machinery Laboratory	1	EE 164	Machinery Laboratory	1
EE 261	Communications	4	EE 262	Communications	4
EE 165	Seminar	1	EE 166	Seminar	1
EE 159	Transmission	3	GE 107	Strength of Materials	3
	Approved Free Electives ..	6	GE 109	Materials Laboratory	1
		—		Approved Free Electives ..	5
		18			—
					18

GROUP THREE
MECHANICAL ENGINEERING
Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	ME 52	Kinetics-Mechanism	4
ME 53	Materials	3	Engl E93	Advanced Composition	3
ME 57	Processes	2		Physical Education	1
	Physical Education	1			—
		—			19
		20			

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
ME 101	Thermodynamics	3	ME 102	Thermodynamics	3
ME 113	Mech. Eng. Laboratory	1	ME 114	Mech. Eng. Laboratory	2
ME 105	Fluid Mechanics	3	ME 108	Aeronautics	3
GE 107	Strength of Materials	3	ME 106	Heat Transfer	3
GE 109	Materials Laboratory	1	ME 150	Machine Design	3
EE 123	Electric Circuits	4	EE 124	Electric Machinery	4
Engl 151	Public Speaking	3			—
		—			18
		18			

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
ME 151	Machine Design	4	ME 158	Industrial Engineering	3
ME 155	Internal Combustion Engines	3	ME 162	Power Plants	3
ME 153	Heating—Air Conditioning ..	3	ME 154	Refrigeration	3
ME 159	Mech. Eng. Laboratory	2	ME 160	Mech. Eng. Laboratory	2
	Approved Free Electives ..	6		Approved Free Electives ..	6
		—			—
		18			17

Bachelor of Science in Nursing Education

The requirements for the degree of Bachelor of Science in Nursing Education are designed to prepare qualified graduate nurses for administrative, teaching, and supervisory positions in schools of nursing and in nursing service agencies.

To be eligible for admission to Duke University as a candidate for this degree a student must meet the following requirements:

1. Graduation from an approved secondary school with at least fifteen acceptable units of credit. (See specific requirements for admission to Trinity College and the Woman's College.)

2. Graduation from an approved school of nursing which provides satisfactory preparation in medical, surgical, pediatric, and obstetric nursing, as a minimum (psychiatric nursing is desirable).

3. Satisfactory scores on specified tests.

4. Supervisory ratings from three individuals, preferably former teachers and supervisors with whom the individual has had fairly recent contact.

Credit for 120 semester hours (exclusive of physical education) on which an average grade of at least C is made is required for the degree of Bachelor of Science in Nursing Education. The work of the final year must be taken in residence at Duke University. The program of studies leading to this degree must include:

	S.H.
1. MINIMUM GENERAL EDUCATION REQUIREMENTS.....	38-50
May be taken at Duke University or at any accredited college or university.	
English 1-2	6
*Natural science	8
History (1-2 or 51-52)	6
Economics (51-52)	
Political Science (61-62)	
Sociology (91-92 or 101)	3-6
Psychology (91, 100 or 101)	3-6
†Electives	12-18
2. BASIC NURSING PROGRAM.....	maximum 40
May be taken at the Duke School of Nursing or at any approved school of nursing. The amount of credit which is granted for the nursing school program is determined on an individual basis.	
3. COURSES IN EDUCATION AND NURSING EDUCATION.....	3
88 Psychological Foundation of Modern Education.....	3
118 Educational Psychology—Psychological Development.....	3
84N Social Foundations of Nursing Education.....	3
101N The Curriculum of the School of Nursing.....	3
115-116N Nursing Education: Principles and Practices.....	8
117 Community Nursing Service—Seminar in Field Trips to Community Agencies	3
4. FIELD OF CONCENTRATION.....	15
Fifteen semester hours in one field, such as chemistry, physics, psychology, sociology, zoology, or in a clinical area in conjunction with related subjects. No freshman work may be included in these 15 semester hours.	
5. PROFESSIONAL EXPERIENCE	
One year of experience as a graduate nurse is required before the degree is awarded.	

* Botany 1-2, Chemistry 1-2, Geology 51-52, Physics 1-2, Zoology 1-2.

† Literature, art, music, religion, ethics, language are suggested.

Academic-Professional Courses

The provision whereby a senior may elect the work of the first year in a professional school of the University shall apply solely to eligible students in Trinity College or the Woman's College. The privilege of completing a combined course for the degree is conditioned upon admission to the professional school at the close of the junior year. A student thus admitted registers as a senior in the College and as a first-year student in the professional school.

ACADEMIC-FORESTRY COMBINATION

A student who has completed the program of study given below with an average grade of C or higher in accordance with the academic regulations as stated in this Bulletin may, with the approval of the Dean of the College and the Admissions Committee of the School of Forestry, transfer to the School of Forestry. Upon the satisfactory completion of the work of the first year in the School of Forestry the student may become eligible for the degree of Bachelor of Science from Trinity College, Duke University. This provision shall apply solely to eligible undergraduates who have completed three years in residence at Duke University.

Students wishing information concerning admission to the School of Forestry are invited to consult with the dean of that school. Completion of the first three years of work necessary to qualify for the Academic-Forestry Combination does not insure admission to the Duke University School of Forestry, nor impose any restriction upon the School's freedom in selecting students for admission. The professional degree of Master of Forestry may be obtained upon the satisfactory completion of the work of the second year in the School of Forestry.

The program of studies in preparation for admission to the School of Forestry under the combination program includes the following work:

UNIFORM COURSE REQUIREMENTS

	S.H.
Uniform Course Requirements for the B.S. Degree	48-66
Additional Required Courses	24-26
Electives to Make a Total of	94
Summer Field Work	13

These requirements are described in the Requirements for the Bachelor of Science degree in this Bulletin. Spanish may be substituted for French in the foreign language requirement. The natural science requirement is met by completion of Botany 1-2. The economics, history, or political science requirement is met by completion of Economics 51-52. The student who does not present for entrance two acceptable units in history must meet the restricted elective requirement by completion of 6 semester hours in history.

ADDITIONAL REQUIRED COURSES.—The additional required courses are as follows:

	S.H.
Chemistry 1-2	8
Engineering Drawing 1-2	4
Geology 51	4
Physics 1-2 or 51-52	8-10
	<hr/> 24-26

ELECTIVES.—The electives are normally chosen from botany, chemistry, economics, mathematics and philosophy. A minimum of 94 semester hours must be obtained, exclusive of summer field work, for uniform course requirements, additional required courses and electives.

SUMMER FIELD WORK.—This work of 13 weeks, preferably to be taken upon completion of the junior year, includes:

	S.H.
Civil Engineering S110. Plane Surveying	4
Forestry S150. Forest Surveying	5
Forestry S151. Forest Mensuration	4
	<hr/> 13

Students in this combination should have their programs approved by the special adviser for students in the Academic-Forestry Combination. The name of this adviser may be obtained at the dean's office.

ACADEMIC-LAW COMBINATION

A student who has completed with an average grade of C or higher, 96 semester hours of undergraduate work, including the uniform course requirements for the degree of Bachelor of Arts and the work of the junior year in his major and related fields, may, with the approval of the dean of the College, transfer to the Duke University School of Law and be eligible for the degree of Bachelor of Arts from Duke University upon the satisfactory completion therein of the work of the first year.

It is understood that this provision shall apply solely to eligible undergraduates who have completed three years in residence in Duke University, and that not less than the full first-year's work of the Law School will be acceptable for credit towards the bachelor degree.

No single discipline or program of study can be described as the best preparation for the study of law since there are various methods of approach to legal study. Students differ with respect to the undergraduate studies by which they profit most in preparing themselves for law school.

Completion of the undergraduate work necessary to qualify for the Academic-Law Combination does not insure admission to the Duke University School of Law, nor impose any restriction whatever upon its freedom in selecting students for admission. Students wishing further information are invited to consult with the Dean of the School of Law.

ACADEMIC-NURSING COMBINATION

A student who completes the three-year nursing program with an average grade of C or better may, upon recommendation of the Dean of the School of Nursing, apply for admission to the Woman's College of Duke University. If accepted, she may obtain the degree of Bachelor of Arts or Bachelor of Science by fulfilling the requirements of either degree.

Forty semester hours of credit toward the 120 semester hours (exclusive of physical education) required for the Bachelor's degree are allowed for the three-year nursing program. At least 30 semester hours, of which 24 semester hours must be in courses numbered 100 or above, must be taken in residence in the Woman's College. An average grade of C or better is required for all work.

The program of studies leading to the degree of Bachelor of Arts must include:

	S.H.
1. UNIFORM COURSE REQUIREMENTS	47-59
English 1-2	6
Language (completion of the third college year)	6-18
Natural Science	11
Religion	6
Social Science and History	12
Literature, Music, Art, and Philosophy	6
2. BASIC NURSING PROGRAM	40
3. FIELD OF CONCENTRATION	12
At least 12 semester hours in one department other than nursing in courses not primarily open to freshmen	12
4. ELECTIVES	9-21

To be eligible for the degree of Bachelor of Science, a student must complete the course of study outlined under the Requirements for the Degree of Bachelor of Science.

Courses of Instruction

Trinity College and the Woman's College



NOTE: Courses primarily for freshmen are numbered from 1 to 49; those primarily for sophomores are numbered from 50 to 99; those primarily for juniors and seniors from 100 to 199; those primarily for seniors and graduates from 200 to 299. The amount of credit for each course is given in semester hours following the description of the course.

The designation (w) or (E) indicates that the course is to be given on the West Campus or on the East Campus. The designation E means Engineering; L, Law; DS, Divinity School. When this designation precedes a course number, the course is not approved for graduate credit.

Odd-numbered courses are offered in the fall semester, and even-numbered courses are offered in the spring semester. Double numbers separated by a hyphen indicate that the course is a year-course and must normally be continued throughout the year if credit is received. A student must secure written permission from the instructor in order to receive credit for either semester of a year-course. Double numbers separated by a comma indicate that although the course is a year-course credit may be received for either semester without special permission.

COURSES OPEN PRIMARILY TO FRESHMEN

Air Science 1-2
Art 1-2, 1L-2L
Botany 1, 2
Chemistry 1-2
Economics 11
Education 1, 5
English 1-2
French 1-2, 3-4
German 1-2, 3-4
Greek 1-2, 15
Health Education 41
History 1, 2, EI-2

Latin 1-2, 3, 4
Mathematics 1, 5, 6, 16
Music 1-2, 11-12, 47-48
Naval Science 101, 102
Philosophy 48, 49
Physical Education 1, 2
Physics 1-2
Political Science 11-12
Religion 1, 2
Spanish 1-2, 3-4
Zoology 1, 2

AESTHETICS, ART, AND MUSIC

ASSISTANT PROFESSOR EARL G. MUELLER, CHAIRMAN OF THE EXECUTIVE COMMITTEE;
ASSOCIATE PROFESSOR SUNDERLAND, DIRECTOR OF UNDERGRADUATE STUDIES IN ART;
ASSOCIATE PROFESSOR HALL, SUPERVISOR OF FRESHMAN INSTRUCTION IN ART;
ASSISTANT PROFESSOR JULIA W. MUELLER, DIRECTOR OF UNDERGRADUATE
STUDIES IN MUSIC; ASSOCIATE PROFESSOR BONE, SUPERVISOR OF
FRESHMAN INSTRUCTION IN MUSIC; ASSOCIATE PROFESSORS
JENKINS AND MARKMAN; ASSISTANT PROFESSORS
BRYAN, KLENZ, SAVILLE, WITHERS AND WOOD;
MRS. BERNSTEIN, MESSRS. BRODERSON
AND STARS

AESTHETICS

FOR SENIORS AND GRADUATES

201-202. THE PHILOSOPHY OF ART.—Analysis with the aid of examples of general terms used in the discussion of art. Reference in recent aesthetic theories.
6 s.h. (E)

[Not offered in 1954-55]

213-214. HISTORY OF AESTHETICS.—Theories of art and beauty from Pythagoras to Croce. 6 s.h. (E)
[Not offered in 1954-55]

ART

The introductory courses 1-2 or 51-52 are prerequisite for all courses in the History of Art and 1L-2L or 51L-52L for all courses in Design.

FUNDAMENTALS

1-2. INTRODUCTION TO ART.—This course aims (a) to equip the general student with sufficient vocabulary, both verbal and visual, for a basic understanding of architecture, sculpture, painting, and the minor arts as material reflections of man's ideas; and (b) to introduce the more specialized student to the principles of art criticism, the use of documents, and the nature of media. Open only to freshmen; others, see Art 51-52. 6 s.h. (E & W)

ASSOCIATE PROFESSORS HALL AND MARKMAN

1L-2L. DESIGN LABORATORY.—This course aims to develop the student's visual faculty through practice with design elements and experience with media. Freshmen intending to elect further courses in Art are advised to carry this course concurrently with Art 1-2. Open only to freshmen enrolled in Art 1-2; others, see Art 51L-52L. 2 s.h. (E)

ASSISTANT PROFESSOR E. MUELLER; MR. BRODERSON

51-52. INTRODUCTION TO ART.—The aims of this course are identical with those of Art 1-2; the content and method are adapted to the capacities of upperclassmen. Open only to upperclassmen who have not completed Art 1-2. A senior in his last semester may receive credit for one semester. 6 s.h. (E & W)

ASSOCIATE PROFESSORS MARKMAN AND SUNDERLAND

51L-52L. DESIGN LABORATORY.—The aims, content, and method of this course are similar to those of Art 1L-2L. Upperclassmen intending to elect further courses in Art are advised to carry this course concurrently with Art 51-52. Open only to upperclassmen enrolled in Art 51-52, and to those who have completed Art 1-2 or 51-52 without electing Design Laboratory. A senior in his last semester may receive credit for one semester. 2 s.h. (E)

ASSISTANT PROFESSOR E. MUELLER; MR. BRODERSON

HISTORY OF ART

101. MEDIAEVAL ARCHITECTURE.—A survey of Christian architecture in the Near East and Eastern and Western Europe from the beginnings of the mediaeval style in the late classical period to its disintegration in the fifteenth century. 3 s.h. (E)

ASSOCIATE PROFESSOR SUNDERLAND

102. MEDIAEVAL PAINTING AND SCULPTURE.—A study of painting and sculpture in Western Europe from the late classical period through the fourteenth century. 3 s.h. (E)

ASSOCIATE PROFESSOR SUNDERLAND

103. RENAISSANCE AND BAROQUE ARCHITECTURE: ITALY.—Architectural patronage of the great families and the Church, as evidenced by the works of individual designers from Brunelleschi through Michelangelo and Palladio to Borromini. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

104. RENAISSANCE AND BAROQUE ARCHITECTURE: SPAIN AND THE NORTH.—An inquiry into the extension of Italian Renaissance and Baroque influence in architecture, and its modification under local conditions elsewhere in Europe. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

105. EUROPEAN ARCHITECTURE SINCE 1700.—An analysis of the sources of contemporary European architecture in the historic revival styles and counter-revolts, technical invention and new structural materials, industrial expansion and social planning. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

106. ARCHITECTURE OF THE AMERICAS.—A study of building in the Western Hemisphere from the Precolumbian cultures to the present with emphasis on the architecture of the United States since the Revolution. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

110. ENGLISH ARCHITECTURE.—The English home, church, and community, studied as the architectural reflection of continental influences, independent developments in the British Isles, and colonial expansion. This course is intentionally directed toward the interests of students majoring in history or literature. 3 s.h. (E) ASSOCIATE PROFESSOR HALL

123. RENAISSANCE PAINTING: ITALY.—A study of Italian painting, mainly in Florence, from the end of the fourteenth through the fifteenth century. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

124. ITALIAN ART AFTER 1500.—A study of the mature and late phases in the evolution of Italian Renaissance painting and sculpture. 3 s.h. (E) ASSOCIATE PROFESSOR JENKINS

125. RENAISSANCE PAINTING: THE NORTH.—A study of painting in the Netherlands in the fifteenth and sixteenth centuries. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

126. BAROQUE PAINTING: THE NORTH.—A study of the character and tendencies of seventeenth-century painting in Spain, France, and the Lowlands. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

129. PAINTING SINCE 1700.—An investigation of the development of painting in the eighteenth and nineteenth centuries in Europe and in America. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

130. CONTEMPORARY ART.—A study of the twentieth-century movements in painting and sculpture in Europe and the Americas. 3 s.h. (E) ASSISTANT PROFESSOR E. MUELLER

133. A HISTORY OF PRINTS AND DRAWINGS.—The evolution of the principal graphic techniques, media and styles from the fifteenth century to the present. 3 s.h. (E) ASSISTANT PROFESSOR E. MUELLER

150. SURVEY OF PAINTING.—A history of European painting from the Renaissance to the present time. Open to upperclassmen who are not majors and who have not had Art 1-2 or 51-52. 3 s.h. (E) ASSOCIATE PROFESSOR JENKINS
[Not offered in 1954-55]

215. RELIGIOUS ART OF THE ANCIENT NEAR EAST.—A specialized study of the development of art, particularly architecture and sculpture, as the material expression of religious ideas in Egypt, Mesopotamia, and in part of Syria and Palestine, to the Persian conquest. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

216. RELIGIOUS ART OF THE CLASSICAL WORLD.—A specialized study of the religious art, particularly architecture and sculpture, of Greece and Rome, with special emphasis on the monuments in the Near East. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

217. AEGEAN ART.—A study of the problems of Aegean art as the forerunner of Greek art and in relation to the contemporary civilization of the eastern Mediterranean world. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

218. EARLY GREEK ART.—A study of the problems of the origin and development of Greek art in the Geometric period to the end of the Archaic. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

DESIGN

Students other than art majors may receive not more than eight semester hours credit for work in studio courses. For any number of semester hours of credit in studio courses an equal number of hours must be taken in history and criticism.

53-54. BEGINNING STUDIO.—A studio course offering experiment and practice with formal elements of composition in various media. Particular emphasis will be given to drawing; watercolor, collage, and three-dimensional media will be secondarily considered. 4 s.h. (E) ASSISTANT PROFESSOR MUELLER, MR. BRODERSON

55, 56. PAINTING.—A studio course designed to give experience in painting media with individual and group criticism, and discussion of important historic or contemporary ideas in painting as related to student work. Prerequisite: Art 53-54 or consent of the instructor. 4 s.h. (E)

ASSISTANT PROFESSOR MUELLER, MR. BRODERSON

157, 158. ADVANCED PAINTING.—Emphasis is given to the techniques of various painting and design media. Prerequisite: 55, 56. 4 s.h. (E)

ASSISTANT PROFESSOR MUELLER, MR. BRODERSON

159, 160. PRINTMAKING.—This course presupposes a knowledge of design and skill in drawing. Practice in wood engraving; block printing; and in copperplate engraving, etching, aquatint and drypoint. Reference will be made to prints in relation to the design of the book, and historic examples of the art of the print will be analyzed in the study of these techniques. Prerequisite: 53-54. 4 s.h. (E)

ASSISTANT PROFESSOR E. MUELLER; MR. BRODERSON

DEPARTMENTAL MAJOR IN ART

Prerequisites: Introduction to Art (1-2 or 51-52). Design Laboratory (1L-2L or 51L-52L).

Major Requirements: The student will select in consultation with his departmental adviser a sequence of courses emphasizing either history or design.

History of Art: 24 additional semester hours, of which six hours must be in the 200 group, and four hours may be in design. Distribution emphasizing at least two special areas of study is to be determined with the adviser.

Design: 22 additional semester hours, of which sixteen hours must be in design and six hours from courses 102, 123, 124, 125, 126, 129, or 130.

MUSIC

Courses in music are offered both for the general student who wishes to acquire knowledge of music as literature and on a more technical level for those prepared to major in the field. The courses marked * are open to general students without prerequisites.

THEORY

*11-12. THEORY I.—The elements of harmony, rhythm, and form; the visual and aural recognition of scales, intervals, triads, and seventh chords, and their functions in relation to the system of tonality; harmonization of melodies; development of rhythmic discrimination. Designed for those students who wish to pursue a more technical study of music. Three lectures and two laboratory hours. Open to freshmen only. 8 s.h. (E)

STAFF

*61-62. THEORY I.—An amplification of Music 11-12. Open to upperclassmen who have not had Music 11-12. 8 s.h. (E)

STAFF

73-74. THEORY II.—A continuation of Music 11-12, plus analysis and composition of the smaller forms; further development of proficiency in harmonization; continuation of aural training; introductory study of counterpoint. Prerequisite: Music 11-12 or 61-62. 6 s.h. (E)

ASSISTANT PROFESSORS BRYAN AND KLENZ

117-118. THEORY III.—A continuation of Music 73-74. Emphasis upon development of technical and expressive means and stylistic treatment by practical work in composition, and analysis and observation of larger forms; further study of counterpoint. The completion of an original large form composition for chamber group, chorus, or orchestra. Prerequisites: Music 11-12 or 61-62, and 73-74. 4 s.h. (E)

ASSISTANT PROFESSOR KLENZ

121. CONDUCTING.—The conducting of orchestral and vocal scores. Score-reading and analysis, principles of interpretation, establishment of vocal and instrumental conductorial techniques leading to practical experience in conducting the department musical organizations in rehearsal. Prerequisites: Music 11-12 or 61-62, and 73, or consent of the instructor. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

122. ORCHESTRATION.—A study of the technical characteristics and transpositions of the instruments of the modern symphony orchestra and concert band. Instrumentation of piano scores or original compositions for string, woodwind, brass ensembles, and for full symphony orchestra or concert band. Prerequisites: Music 11-12 or 61-62, and 73, or consent of the instructor. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

HISTORY AND CRITICISM

***1-2. INTRODUCTION TO MUSIC.**—Rhythm, melody, harmony, form. The instruments of the orchestra and their use. Orchestral, chamber, choral and operatic music of the Classic and Romantic periods. Designed for those students who wish to acquire a general appreciation of music. Open only to freshmen who do not plan to major in music. 6 s.h. (E)

ASSOCIATE PROFESSOR BONE; ASSISTANT PROFESSORS WITHERS AND WOOD

***51-52. INTRODUCTION TO MUSIC.**—Music from 1700 to the present day. Acquisition of a reading knowledge of notes, rhythms, musical symbols. Study of forms, media, styles and the lives and works of great representative composers. Not open to music majors or to students who have had Music 1-2. 6 s.h. (E)

ASSISTANT PROFESSORS KLENZ AND J. MUELLER

95-96. HISTORY OF MUSIC I.—Historical background and development of music in the Classical, Romantic, and Contemporary period. Study of representative compositions from the Mannheim school through Beethoven, first semester; Schubert to the present, second semester. Prerequisites: Music 1-2 or 11-12 or 61-62, or consent of the instructor. 6 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

***133. ORCHESTRAL LITERATURE.**—A study of orchestral suites, overtures, concerti, symphonies and symphonic poems selected from literature of the eighteenth century to the present. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

***134. CHORAL LITERATURE.**—A study of representative oratorios, cantatas, and masses from Bach to Stravinsky; religious and social implications of sacred choral compositions and performance from the Baroque to the present. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

135. PIANO LITERATURE.—A comprehensive survey of the great works for keyboard instruments, from the time of the English virginal composers to the present. Prerequisites: Music 47A, 48A, 97A, and 98A, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR WITHERS

136. VOCAL REPERTOIRE.—A study of standard recital repertoire; old Italian and old English songs, German lieder, and the French art song. Open to junior and senior Applied Voice majors. 3 s.h. (E)

ASSISTANT PROFESSOR WOOD

137. CHAMBER MUSIC.—A study of form, style, and interpretation of masterpieces of chamber music. Prerequisites: Music 1-2 or 51-52, or 11-12 or 61-62, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR J. MUELLER

138. CONTEMPORARY MUSIC.—A critical survey of contemporary stylistic trends and theory in the light of their twentieth-century background. Prerequisites: Music 1-2 or 51-52 or 11-12 or 61-62, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR KLENZ

145-146. HISTORY OF MUSIC II.—History and technical development of music in Mediaeval, Renaissance, and Baroque periods against a background of European cultural history. First semester: late classic, early Christian music; the evolution of Gregorian Chant; Romanesque, Troubadour and Gothic forms. Second semester: Renaissance and Baroque (J. S. Bach). Prerequisites: Music 95-96 or consent of instructor. 6 s.h. (E)

ASSISTANT PROFESSOR KLENZ

***164. MUSIC IN THE NINETEENTH CENTURY.**—A study of the music of the nineteenth century, from Beethoven to Debussy, with attention to artistic and literary influences, and the relations among the creative minds of the time. Individual projects. 3 s.h. (E)

ASSISTANT PROFESSOR J. MUELLER

*165. OPERA.—Opera from Handel to Strauss; aesthetic and cultural implications of opera from the Baroque to the present. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

195-196. COLLEGIUM MUSICUM (HISTORY OF MUSIC III).—Studies in the integration of music history, theory, and performance. Survey of sources, monuments, and bibliographical techniques. Preparation for performance of representative musical literature through analysis, realization of notations, and stylistic reconstruction. Classroom discussion and reports; also laboratory. Designed for music majors in history or theory and open to others by consent of the instructor. 4 s.h. Laboratory may be taken separately under Applied Music, Medium F. (E)

ASSISTANT PROFESSOR KLENZ

MUSIC EDUCATION

57-58. VOCAL DICTION.—Problems of diction as specifically applied to the art of singing. Required of all Applied Voice majors. 2 s.h. (E)

ASSISTANT PROFESSOR WOOD

106. PIANO METHODS AND MATERIALS.—A study of the materials and methods of piano pedagogy. The appropriate choice of essential and supplementary literature. Development of technique, style, and musicianship. Supervised practice teaching. Prerequisites: Music 47A, 48A, 97A, and 98A, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR WITHERS

107. VOCAL PEDAGOGY.—The problems of private vocal teaching. A detailed study of the function of the vocal mechanism and of the psychological factors in teaching. Open to junior and senior Applied Voice majors, and others with the consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR WOOD

151. PUBLIC SCHOOL MUSIC EDUCATION.—For Elementary Education majors. Child voice and song; rhythmic activities; discriminative listening; music-reading; use of elementary instruments such as autoharp, tonette, and rhythm band instruments; music as a creative art in its own right and as an adjunct to other studies. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

APPLIED MUSIC

The study of Applied Music concerns the use and understanding of technics of performance in relation to the standard literature of each medium or ensemble group. Instruction is offered in the following media: A. Piano; B. Strings; C. Woodwinds; D. Brass; E. Voice; F. Ensemble—Piano, Instrumental, Vocal, and the Departmental Ensembles listed below. Instruction in media A through E may be private or in classes limited to a minimum of 4 and a maximum of 7 students. Class instruction is restricted to the first 4 grades of proficiency. Class instruction shall be designated by adding the letter X to the appropriate medium and year-in-school classification. (Example: junior year, Woodwinds, class instruction is recorded 147CX.)

Students who wish to enroll in Applied Music courses *must* consult with the appropriate faculty member *before* registering for a course.

47A-48A, 97A-98A, 147A-148A, 197A-198A. PIANO.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSOR WITHERS; MRS. BERNSTEIN

47B-48B, 97B-98B, 147B-148B, 197B-198B. VIOLIN, VIOLA, CELLO.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSORS KLENZ AND J. MUELLER

47C-48C, 97C-98C, 147C-148C, 197C-198C. WOODWINDS.—For freshmen, sophomores, juniors, seniors. (E)

ASSOCIATE PROFESSOR BONE

47D-48D, 97D-98D, 147D-148D, 197D-198D. BRASS.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSOR BRYAN

47E-48E, 97E-98E, 147E-148E, 197E-198E. VOICE.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSOR WOOD

47F-48F, 97F-98F, 147F-148F, 197F-198F. ENSEMBLE.—For freshmen, sophomores, juniors, seniors. Prerequisite: consent of the instructor. 2 s.h. (E)

STAFF

Credits: Credit for Media A through E will be granted on the basis of 2 s.h. per semester for one period of private study and a minimum of 6 hours practice per week; 1 s.h. per semester for one period of class study and a minimum of 6 hours practice per week.

Credit for instruction in Medium F will be granted on the basis of 1 s.h. per semester for one period of instruction per week and a minimum of 6 hours practice per week. No additional fee required.

Students other than Music Majors may receive not more than 8 s.h. credit for work in Applied Music. For any number of hours in Applied Music an equal number of hours must be taken in Music Theory or in Music History and Criticism.

Music Majors may take a minimum of 6 s.h. and a maximum of 14 s.h. in Applied Music according to the following areas of concentration:

Majors in Music Theory or in Music History and Criticism must earn 6 s.h. credit in Applied Music. (Credit may be reckoned from Grade I.)

Majors in Applied Music may earn a maximum of 14 s.h. credit in Applied Music.

Majors in Music Education must earn credit in Applied Music as follows in order to qualify for state certification in North Carolina:

General (Vocal) Major—13 s.h.

- a. Voice, reckoned from Grade I—6 s.h.
- b. Piano, reckoned from Grade I—6 s.h.
- c. Ensemble—1 s.h.

Instrumental Major—13 s.h.

- a. Major medium, reckoned from Grade III—8 s.h.
- b. Instrument classes—1 s.h. each of woodwinds, brass, string instruments other than major-minor instruments above—3 s.h.
- c. Ensemble—2 s.h.
- d. For purposes of certification in the State of North Carolina a student should earn credits beyond those accepted for graduation as follows: Piano proficiency sufficient to play at sight hymns or music of equivalent difficulty and/or study of a string instrument—4 s.h. and participation in one of the departmental organizations listed below—4 s.h.

Fees per Semester: Fees are charged for Applied Music media A, B, C, D, and E, and for practice facilities. They are payable to the Treasurer's Office of Duke University at the beginning of each semester, as follows:

One ½ hour private lesson per week for one semester.....	\$45.00
Two ½ hour private lessons per week or one 1 hour private lesson per week for one semester.....	80.00
One 1 hour class lesson per week for one semester.....	25.00
One hour's daily use of cubicle with piano for one semester....	15.00
One hour's daily use of cubicle without piano for one semester..	10.00

DEPARTMENTAL ENSEMBLES

Brass Ensemble
Chamber Orchestra
Collegium Musicum
Madrigal Singers

DEPARTMENTAL ORGANIZATIONS

Duke University Concert Band
Duke University Symphony Orchestra

DEPARTMENTAL MAJOR IN MUSIC

Prerequisite: Music 11-12 or 61-62.

Major Requirements: 24 s.h. including 6 s.h. in Applied Music. The major student will select, in consultation with his departmental adviser, a sequence of Music courses emphasizing (a) theory, or (b) history and criticism, or (c) education, or (d) the use and understanding of a particular medium.

AIR SCIENCE

PROFESSOR KNIGHT, COLONEL, USAF, CHAIRMAN; ASSOCIATE PROFESSOR MCBRYDE, LIEUTENANT COLONEL, USAF, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR SMITH, CAPTAIN, USAF, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSORS RENKEN, MAJOR, USAF, AND CLARK, CAPTAIN, USAF; MAJOR MYERS, USAF, AND CAPTAIN STEVENS, USAF

ELIGIBILITY REQUIREMENTS.—All physically qualified freshmen who are citizens of the United States and are enrolled in Trinity College or the College of Engineering are eligible to enroll in the Air Force ROTC. Veterans may be exempted from the freshman and sophomore courses (AS 1-2 or AS 51-52). In special cases where permission has been granted, certain qualified students from the Graduate and Professional Schools may be enrolled.

DEPOSIT REQUIRED.—Each student must make a deposit of twenty dollars with the University Treasurer to insure return of all government property.

AIR FORCE ROTC COURSES.—All students pursue the same generalized courses. No flying training is included in the college program. All specialized training will be given when the individual enters the Air Force.

The courses are established by the United States Air Force and are approved by the College as electives for all undergraduates. Field or laboratory instruction in leadership, drill, and exercise of command is included as a part of all courses to indoctrinate the student in the fundamental principles of command.

BASIC COURSES

The following courses are required of students in the Air Force Reserve Officers Training Corps, as outlined in the various curricula:

AS 1-2. FIRST YEAR BASIC AIR SCIENCE.—This course introduces the student to the AFROTC Program and the Field of Aviation. The fundamentals of global geography are studied in relationship to international tensions and the resulting formation of security organizations. The course concludes with an analysis of the instruments of National Military Security. 4 s.h. (w) STAFF

AS 51-52. SECOND YEAR BASIC AIR SCIENCE.—Stress is laid upon the elements of aerial warfare including targets, weapons, aircraft, air oceans, air bases, and Air Force organizations. A survey is made of the careers open to personnel in the Air Force. 4 s.h. (w) STAFF

ADVANCED COURSES

All students selected to continue in Air Science pursue:

AS 101-102. FIRST YEAR ADVANCED AIR SCIENCE.—The first semester is concerned with the Air Force commander and his staff; techniques of problem solving; communications processes and Air Force correspondence; instructing in the Air Force; military law, courts and boards. The second half of the course deals with Applied Air Science including aircraft engineering, navigation and weather. Attention is also given to the functions of an Air Force base. Prerequisites: AS 1-2 and 51-52 or equivalent. 8 s.h. (w) STAFF

AS 201-202. SECOND YEAR ADVANCED AIR SCIENCE.—The first semester includes a critique of summer camp training; seminar studies in the principles of leadership and management; and the relationship of military aviation to the art of war. The second semester is concerned with the military aspects of world political geography and with career guidance. Prerequisites: AS 1-2 and 51-52 or equivalent, and AS 101-102. 8 s.h. (w) STAFF

BOTANY

PROFESSOR BLOMQUIST, CHAIRMAN; ASSOCIATE PROFESSOR ANDERSON, DIRECTOR OF UNDERGRADUATE STUDIES; DR. MANLY, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSOR PHILPOTT, SUPERVISOR OF FRESHMAN INSTRUCTION (WOMAN'S COLLEGE); PROFESSORS HARRAR, KRAMER, OOSTING, AND WOLF; ASSOCIATE PROFESSORS BILLINGS, NAYLOR, AND PERRY; ASSISTANT PROFESSOR AND RESEARCH ASSOCIATE SCHUSTER; AND ASSISTANTS

I. GENERAL BOTANY.—An introduction to the structure and life-processes of seed plants and the environmental factors influencing their distribution. Laboratory, discussions, and field trips. Three two-hour periods. 4 s.h. (w & e) STAFF

2. GENERAL BOTANY.—A survey of the plant kingdom with emphasis on reproduction and an introduction to identification. Three two-hour periods. Prerequisite: Botany 1. 4 s.h. (w & e) STAFF

51. CULTURE AND PROPAGATION OF PLANTS.—Experimental studies of the processes involved in growth, and the application of this knowledge to the selection, growth, and propagation of plants. Prerequisite: one year of botany. 4 s.h. (w) PROFESSOR KRAMER

52. PLANT IDENTIFICATION.—Practice in the identification of local plants, especially flowering plants, and a study of the principles and rules underlying plant classification. Laboratory, lectures, and field trips. Prerequisite: one year of botany. 4 s.h. (w) PROFESSOR BLOMQUIST

53. ECOLOGY OF ECONOMIC PLANTS.—The principles of plant growth and distribution as applied to crop plants. Forest, grassland, and representative cultivated species will be considered in relation to environment. Prerequisite: one year of a natural science. 3 s.h. (e) PROFESSOR OOSTING

55. MORPHOLOGY AND ANATOMY OF VASCULAR PLANTS.—A comparative study of representative ferns and seed plants, including vegetative and reproductive structures. Prerequisite: one year of botany. 4 s.h. (e) ASSISTANT PROFESSOR PHILPOTT

101. PRINCIPLES OF HEREDITY.—The basic principles of heredity and their significance. Lectures, three hours; laboratory, two hours; conference (attendance optional), one hour. Laboratory work includes experimental breeding of the fruit fly. May be taken as a lecture course without laboratory. Prerequisite: one (high-school or college) course in biology, botany, or zoology. High-school or college algebra recommended. 3 or 4 s.h. (w) ASSOCIATE PROFESSOR PERRY

103. GENERAL BACTERIOLOGY.—A study of the morphology and fundamental physiological processes of bacteria; their relationship to sanitation, public health, soil fertility, and food preservation. Prerequisite: one year of botany or zoology, or equivalent. 4 s.h. (w) PROFESSOR WOLF

104. THE STRUCTURE AND IDENTIFICATION OF LOWER PLANTS.—A study of representative examples of algae, fungi, mosses and liverworts, including collection, identification, and classification of common forms. Offered in alternate years. Prerequisite: one year of botany. 4 s.h. (w) ASSOCIATE PROFESSOR ANDERSON

151. INTRODUCTORY PLANT PHYSIOLOGY.—The principal physiological processes of plants, including water relations, synthesis and use of foods, and growth phenomena. Prerequisite: Botany 1, 2 or equivalent; one year of chemistry recommended. 4 s.h. (w) PROFESSOR KRAMER

156. PLANT ECOLOGY.—The principal factors affecting plants and plant communities as they exist in different environments. Laboratory, lectures, and field trips. Prerequisites: Botany 1, 2 and 52, or equivalent. 4 s.h. (e) ASSOCIATE PROFESSOR BILLINGS

202. GENETICS.—The principles of heredity, their cytological basis, and their bearing on other fields of biology. Laboratory work involves experimental breeding of the fruit fly and interpretation of data from the breeding of plants. Offered in alternate years. Prerequisites: one year of botany or zoology, or equivalent, and college algebra. 4 s.h. (w) ASSOCIATE PROFESSOR PERRY

203. PLANT CYTOLOGY.—A study of the structure and organization of plant cells in relation to growth, reproduction and especially heredity. Offered in alternate years. Prerequisite: one year of botany. 4 s.h. (w) ASSOCIATE PROFESSOR ANDERSON

204. ADVANCED PLANT ANATOMY.—The structure of vegetative and reproductive organs of seed plants. Physiological and ecological implications of structure are stressed. Offered in alternate years. Prerequisites: Botany 55 or equivalent. 4 s.h. (w) ASSISTANT PROFESSOR PHILPOTT

216. BOTANICAL MICROTÉCHNIQUE.—Studies in methods of preparing temporary and permanent microscopical slides; theory of staining; the use of the microscope, especially microscopical measurements; drawing, and photomicrography, botanical photography, and lantern slides. Prerequisite: two semesters of natural science. 4 s.h. (w) ASSOCIATE PROFESSOR ANDERSON

221. STRUCTURE AND CLASSIFICATION OF FUNGI.—Prerequisite: two semesters of botany. 4 s.h. (w) PROFESSOR WOLF

222. PHYSIOLOGY AND ECOLOGY OF FUNGI.—Prerequisite: Botany 221 or equivalent. 4 s.h. (w) PROFESSOR WOLF

225-226. SPECIAL PROBLEMS.—Students with adequate training may do special work in the following fields:

a. BACTERIOLOGY, MYCOLOGY, AND PLANT PATHOLOGY.

PROFESSOR WOLF

b. CYTOLOGY.

ASSOCIATE PROFESSOR ANDERSON

c. ECOLOGY.

PROFESSOR OOSTING AND ASSOCIATE PROFESSOR BILLINGS

d. GENETICS.

ASSOCIATE PROFESSOR PERRY

e. MORPHOLOGY AND ANATOMY OF HIGHER GROUPS.

PROFESSORS HARRAR AND ASSISTANT PROFESSOR PHILPOTT

f. MORPHOLOGY AND TAXONOMY OF LOWER GROUPS.

PROFESSOR BLOMQUIST AND ASSOCIATE PROFESSOR ANDERSON

g. PHYSIOLOGY.

PROFESSOR KRAMER AND ASSOCIATE PROFESSOR NAYLOR

i. TAXONOMY OF HIGHER GROUPS.

PROFESSOR BLOMQUIST

j. SENIOR SEMINAR.—1 s.h. (w)

STAFF

252. ADVANCED PLANT PHYSIOLOGY.—The physicochemical processes and conditions underlying the physiological processes of plants. Prerequisite: Botany 151 or equivalent; organic chemistry recommended. 4 s.h. (E)

ASSOCIATE PROFESSOR NAYLOR

254. PLANT WATER RELATIONS.—A study of factors affecting the availability of water, its absorption and use in plants, and the effects of water deficits on plant processes. Assigned readings, reports, and lectures. Prerequisite: Botany 151 or equivalent. 3 s.h. (w)

PROFESSOR KRAMER

255. ADVANCED TAXONOMY.—A study of the historical background of plant taxonomy, modern concepts and systems of classification, nomenclatorial problems and the taxonomy of specialized groups. Prerequisite: two years of botany, including Botany 52 or equivalent. 4 s.h. (w)

PROFESSOR BLOMQUIST

256. COMMUNITY ANALYSIS AND CLASSIFICATION.—The development of concepts and methods in synecology leading to present applications of theory and field techniques. Prerequisite: Botany 156 or equivalent. 3 s.h. (E)

PROFESSOR OOSTING

257. PRINCIPLES OF PLANT DISTRIBUTION.—Interpretations of floristic and ecological plant geography of world vegetation. Prerequisite: 156 or equivalent. 3 s.h. (E)

ASSOCIATE PROFESSOR BILLINGS

258. PHYSIOLOGY OF GROWTH AND DEVELOPMENT.—Consideration of the internal factors and processes leading to the production of new protoplasm and its differentiation at the cellular, tissue, and organ level in plants. Prerequisite: Botany 151 or equivalent; organic chemistry recommended. 3 s.h. (E)

ASSOCIATE PROFESSOR NAYLOR

259. ENVIRONMENTAL MEASUREMENTS.—Methods of obtaining and evaluating climatological data for ecological purposes with special attention to instrumentation and microclimate. Prerequisite: Botany 151 and 156 or equivalent. 3 s.h. (E)

ASSOCIATE PROFESSOR BILLINGS

FOREST BOTANY

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1, 2. 3 or 4 s.h. (w)

PROFESSOR WOLF

253. DENDROLOGY.—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of botany. 3 s.h. (w) PROFESSOR HARRAR

DEPARTMENTAL MAJOR

Prerequisites: Botany 1 and 2.

Major Requirements: A minimum of 21 hours (B.S., 24 hours) of work including courses 52, 55, and 104. The remaining hours may be selected from any other courses in the Department for which the student is eligible, subject to the approval of the Departmental Adviser. All majors are expected to register for Senior Seminar for one semester of their senior year.

Related Work: Courses in at least two Natural Science Departments sufficient to total, with major work, 42 s.h. (B.S., 48 s.h.).

CHEMISTRY

PROFESSOR HOBBS, CHAIRMAN; PROFESSOR SAYLOR, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSOR HILL, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS BIGELOW, GLOCKER (VISITING LECTURER), GROSS, HAUSER, LONDON AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; MR. BAYLESS AND ASSISTANTS

1-2. GENERAL INORGANIC CHEMISTRY.—Lectures and recitations on the elementary principles of chemistry and on the occurrence, preparation, properties, and uses of the elements and their compounds. The laboratory work includes qualitative analysis of some of the more common metals. One lecture, two recitations, and three laboratory hours, throughout the year. 8 s.h. (W & E)

PROFESSOR HILL; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; MR. BAYLESS AND ASSISTANTS

61 FUNDAMENTALS OF ANALYTICAL CHEMISTRY.—A study of the reactions of electrolytes in solution and of chemical equilibrium illustrated by laboratory experiments involving the techniques of gravimetric, volumetric, and colorimetric analysis. One lecture, one recitation and six laboratory hours. Prerequisites: Chemistry 1-2, and Mathematics 6 or equivalent. 4 s.h. (w)

PROFESSORS SAYLOR AND VOSBURGH; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; AND ASSISTANTS

70. QUANTITATIVE ANALYSIS.—A study of the theory and technique of inorganic gravimetric and volumetric analysis. One lecture, one recitation, and six laboratory hours. Prerequisite: Chemistry 61. 4 s.h. (w)

PROFESSORS SAYLOR AND VOSBURGH; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; AND ASSISTANTS

131. ADVANCED QUANTITATIVE ANALYSIS.—A second course in the theory and technique of inorganic analysis with special reference to the analysis of complex materials. One lecture and six laboratory hours. Prerequisite: Chemistry 70. 3 s.h. (w)

PROFESSORS VOSBURGH AND SAYLOR AND ASSISTANTS

151-152. ORGANIC CHEMISTRY.—An introduction to the study of the compounds of carbon in which the chemistry of aliphatic and aromatic compounds is considered. Laboratory experiments are selected to illustrate the more important reactions and preparations of organic compounds. Two lectures, one recitation, and three laboratory hours. Prerequisite: Chemistry 61. Course 151 is prerequisite for 152. 8 s.h. (w)

PROFESSORS BIGELOW AND HAUSER; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSOR WILDER; AND ASSISTANTS

206. ELEMENTS OF THEORETICAL CHEMISTRY.—A course in the general principles of physical chemistry for students who do not present credit in calculus. Credit is not given for both 206 and 261-262. Three recitation and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics, 6 s.h. With the permission of the Director of Graduate Studies, graduate students from other departments may offer other advanced science courses in place of some of these prerequisites. 4 s.h. (w)

PROFESSORS SAYLOR AND HOBBS

215-216. **ADVANCED INORGANIC CHEMISTRY.**—A study of modern theories of valence and molecular structure; also of inorganic compounds, particularly the less common types, illustrated by suitable laboratory preparations. Prerequisites: Chemistry 70, 151-152, and 261-262, or 206. 6 s.h. (w)

PROFESSORS VOSBURGH AND HILL; ASSISTANT PROFESSOR STROBEL

233. **INSTRUMENTAL ANALYSIS.**—Experiments in the use of physical measuring instruments in chemical analysis with special attention to optical instruments. One lecture and three laboratory hours. Prerequisites: Chemistry 70 and one year of physics. 2 s.h. (w)

ASSISTANT PROFESSOR STROBEL; PROFESSORS HOBBS, SAYLOR, AND VOSBURGH

234. **PHYSICO-CHEMICAL METHODS OF ANALYSIS.**—Discussion of physico-chemical principles as applied to methods of instrumental analysis, illustrated by laboratory experiments with emphasis on methods involving electrical techniques. One lecture and three laboratory hours. Prerequisites: Chemistry 70 and either 261-262 or 206; either of the latter may be taken concurrently. 2 s.h. (w)

ASSISTANT PROFESSOR STROBEL; PROFESSORS HOBBS, SAYLOR, AND VOSBURGH

251. **QUALITATIVE ORGANIC ANALYSIS.**—Systematic identification of organic compounds, including a study of solubilities and classification reactions. One lecture and six laboratory hours. With permission of the Director of Graduate Studies, graduate students may take three hours of laboratory work instead of six and receive 2 semester hours credit. Prerequisites: Chemistry 70 and 151-152. 3 s.h. (w)

PROFESSOR HAUSER AND ASSISTANTS

252. **ADVANCED ORGANIC PREPARATIONS.**—A laboratory course designed to supplement the student's knowledge of fundamental organic processes by a selected group of laboratory exercises accompanied by oral discussions of techniques and theories pertinent to the experiments. Five hours laboratory and lecture with lectures in alternate weeks. Prerequisite: Chemistry 70 and 151-152. 2 s.h. (w)

ASSOCIATE PROFESSOR BROWN AND PROFESSOR BIGELOW

261-262. **PHYSICAL CHEMISTRY.**—Fundamentals of general theoretical chemistry illustrated by selected laboratory experiments. Two recitations and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics 51-52 or equivalent. 6 s.h.

PROFESSORS HOBBS AND SAYLOR

271. **INTRODUCTION TO RESEARCH.**—Lectures on the use of chemical literature, research methods, recording and publication of results, and other topics. One lecture. 1 s.h. (w)

ASSOCIATE PROFESSOR BROWN

275-276. **RESEARCH.**—The aim of this course is to give instruction in methods used in the investigation of original problems. It is open to seniors by permission of the Director of Undergraduate Studies. Nine hours a week and conferences. 3 or 6 s.h. (w)

PROFESSORS BIGELOW, GROSS, HAUSER, HILL, HOBBS, LONDON, SAYLOR AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHAW AND BROWN;

ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

DEPARTMENTAL MAJOR

A. For the degree of A.B.

Prerequisites: Chemistry 1-2, Mathematics, 6 s.h.

Major Requirements: 22 s.h., including Chemistry 61, 70, 151-152, and an additional 6 or 7 s.h., which may be satisfied by 261-262 or by 206 together with 2 or 3 s.h. selected from courses 131, 233, 234 and 251.

Related Work: 20 s.h., including Physics, 8 s.h., and a total of 12 s.h. additional, usually in Botany, Geology, Mathematics, Physics, or Zoology.

B. For the degree of B.S.

Prerequisites: Chemistry 1-2, Mathematics, 6 s.h.

Major Requirements: Chemistry 61, 70, 131, 151-152, 234, 251, 261-262.

Related Work: 18 s.h., including Physics, 8 or 10 s.h., and Mathematics 50, 51, and 52.

The language requirements must be satisfied by German and either French or Russian.

ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR HOOVER, CHAIRMAN; PROFESSOR DE VYVER, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSORS BLACK, HANNA, HUMPHREY, RATCHFORD, SIMMONS, SMITH, SPENGLER, AND VON BECKERATH; ASSOCIATE PROFESSORS JOERG, LONDON, LEMERT, MANN, SAVILLE, AND SHIELDS; ASSISTANT PROFESSORS CARTTER, DEWEY, DICKENS, AND MCKENZIE; MESSRS. BOWDEN, AND WICKER

The courses offered by the Department are listed under three divisions, Economics, Accounting, and Business Administration.

In general, the Economics courses aim to develop in the student such critical and analytical skills as underlie the ability to understand economic problems and institutions, both in their contemporary and in their historical setting. While no particular vocational or professional goal is emphasized, these courses furnish the academic background necessary for many positions in industry, for work in the economic branches of government service, and for graduate study in economics and the social sciences.

Courses in Accounting and Business Administration, although more concerned with general principles than with specific applications, stress in greater measure than courses in Economics the knowledge and techniques useful to students definitely preparing for business careers. The student who majors in Accounting may elect courses in accountancy, business law, and related work, sufficient to qualify for admission to C.P.A. examinations.

ECONOMICS

51-52. PRINCIPLES OF ECONOMICS.—6 s.h. (E & W)

STAFF

This course must be passed by all students planning to elect further courses in Economics and Business Administration.

Sections of Economics 51 will be offered during the spring semester, and sections of Economics 52 will be offered during the fall semester.

103. TRANSPORTATION.—Essential features, problems, and competitive positions of rail, highway, air, and inland-water transportation, with most emphasis on rail transportation. Special attention is given to the economic significance of transportation, and to cost factors, rates and their economics effects and regulations. 3 s.h. (W)

ASSOCIATE PROFESSOR LONDON

107. CONSERVATION.—A study of the extent and distribution of our natural resources and their service in regional and national development. Emphasis will be placed upon both the natural and human factors involved in the genesis of current problems. Term reports dealing with problems of special interest to those participating will be considered. 3 s.h. (W)

ASSOCIATE PROFESSOR LEMERT

132. THE ECONOMIC HISTORY OF THE UNITED STATES.—A study of the agricultural, industrial, commercial, and financial progress of the United States from colonial times to the present day. 3 s.h. (W)

PROFESSOR SMITH

149. INTERMEDIATE ECONOMICS.—This course develops methods of economic analysis beyond the principles level. Major emphasis is laid on the determination of price and distribution of income. These problems are studied in the context of both competitive and monopolistic market structures. 3 s.h. (W)

STAFF

152. GLOBAL GEOGRAPHY.—The subject matter involves resources patterns and world affairs, economic problems, geocultural problems, and geographic factors affecting geopolitical questions. No prerequisite. 3 s.h. (E)

ASSOCIATE PROFESSOR LEMERT

153. MONEY, CREDIT AND BANKING.—This course begins with a study of the nature, characteristics, and functions of money, credit, and the commercial banking system. It covers also the history of commercial banking in the United States; the foundation, organization, and functions of the Federal Reserve System; the supervision and control of commercial banks; deposit insurance; and the value of money. 3 s.h. (W)

PROFESSOR SIMMONS; PROFESSOR RATCHFORD; ASSOCIATE

PROFESSOR SAVILLE; MR. BOWDEN

155. **LABOR PROBLEMS.**—An examination of present-day labor problems followed by an intensive study of methods used by employers and workers in meeting those problems. 3 s.h. (w) PROFESSOR DE VYVER; ASSISTANT PROFESSOR CARTER

161. **EUROPEAN ECONOMIC PROBLEMS.**—This course deals with the losses and economic dislocations of the war, the problem of developing a new pattern of intra-European and world trade, the effort to stabilize prices, expand investments and production, and the effect of economic planning and controls. 3 s.h. (w)

PROFESSOR HUMPHREY

169. **ECONOMICS OF CONSUMPTION.**—Economic problems of the family. Factors determining choice; commercial and legal standards for consumer's goods; consumer credit and co-operation; income and standards of living. 3 s.h. (w)

ASSOCIATE PROFESSOR SAVILLE

186. **LATIN-AMERICAN ECONOMICS.**—Facts and factors in the economic structure and growth of the Latin-American nations; population, labor productivity, and standards of living; problems of industry, agriculture, and mining; transportation and public utilities; monetary and fiscal policies; the migration of capital; economic thought and institutions. 3 s.h. (w)

PROFESSOR SMITH

187. **PUBLIC FINANCE.**—This is a general course in the principles of public finance. It covers the constitutional, economic, and administrative aspects of public revenues, public expenditures, public debts, and intergovernmental fiscal relations. Special attention is given to current trends and problems. 3 s.h. (w)

PROFESSOR RATCHFORD

189. **BUSINESS AND GOVERNMENT.**—An examination of the public policies which most directly affect the operation of competition in the business world. The course considers the leading philosophies of public control and economic development, the validity of their presuppositions, and their influence on legislation, court decisions, and administrative law. 3 s.h. (w)

ASSISTANT PROFESSOR DEWEY

193. **ECONOMIC SYSTEMS.**—A study of alternative economic systems. An analysis of the basic elements of capitalism and of collectivist types of economic systems. Particular attention is given to an analysis of the economic system of Soviet Russia. Credit for this course will be given only if the student takes Economics 194. Prerequisite: permission of the department. 3 s.h. (w)

PROFESSOR HOOVER

194. **ECONOMIC FUNCTIONS OF THE STATE.**—A continuation of Economics 215. A consideration of the economic functions of society and of the contrasting roles of the state in the various economic systems in carrying on these functions. The Nazi system, the quasiosocialized economics of Europe, as well as the modifications of old-style capitalism in the United States are analyzed. Prerequisite: Economics 193. 3 s.h. (w)

PROFESSOR HOOVER

201. **SENIOR SEMINAR IN ECONOMICS.**—Problems in theory and applied economics. Readings, reports, and discussion of selected topics. For majors in Economics, with consent of the Department. 3 s.h. (w)

STAFF

204. **ADVANCED MONEY AND BANKING.**—Structure and functioning of the monetary and banking mechanism. Presupposes a thorough grounding in the field. Particular attention is given to significant areas involving issues of economic policy. Primary emphasis is placed upon the underlying basis of monetary management and upon its implementation by the central banking authorities. 3 s.h. (w)

PROFESSOR SIMMONS

217. **POPULATION PROBLEMS AND RESOURCES.**—Survey of population theory and policy. Study of national and international trends in population—growth and resource-use, together with analyses of their economic and social implications. 3 s.h. (w)

PROFESSOR SPENGLER

218. **BUSINESS CYCLES.**—A study of the various types of cyclical movements in industry, with special emphasis on cycle theory and methods of controlling or modifying business cycles. 3 s.h. (w)

PROFESSOR HUMPHREY

219. **ECONOMIC PROBLEMS OF UNDER-DEVELOPED AREAS.**—Consideration and analysis of the economic and related problems of under-developed countries. Some attention will be given to national and international programs designed to accelerate the solution of these problems. 3 s.h. (w) PROFESSOR SPENGLER

231. **ECONOMIC HISTORY OF EUROPE.**—The economic development of Europe from medieval times to the present, treating such topics as the guilds, mercantilism, money, banking, crises, the Industrial Revolution, the interrelationships of government and business, and the economic consequences of war. 3 s.h. (w) PROFESSOR SMITH

233. **STATE AND LOCAL FINANCE.**—A study of expenditures, taxation, and financial administration in state and local governments with emphasis on current problems. Special attention will be given to research methods and materials and to the financial relations between state and local governments. Prerequisite: Economics 187 or consent of instructor. 3 s.h. (w) PROFESSOR RATCHFORD

237-238. **STATISTICAL METHODS.**—A study of statistical methods appropriate for dealing with problems in business and the social sciences. In addition to developing more thoroughly the subjects considered in Business Statistics, the following methods will be considered: simple, multiple, partial, and curvilinear correlation; curve fitting; probability; frequency distributions; and reliability of estimates. Prerequisite: Economics 138 or consent of the instructor. Either semester may be taken for credit. 6 s.h. (w) PROFESSOR HANNA

240. **NATIONAL INCOME.**—A critical survey of the conceptual framework and structure of national income and its components, the reliability of national income estimates, and their use in analyzing questions of economic policy. 3 s.h. (w) PROFESSOR HANNA

241. **VALUE AND DISTRIBUTION.**—This course is a critical survey of the leading contemporary explanations of price formation and of the determination of interest, rent, wages, and profits. 3 s.h. (w) PROFESSOR SPENGLER

243. **MATHEMATICAL ECONOMICS.**—A systematic survey of mathematical economic theory. The principal topics are conditions of static equilibrium, including stability conditions, dynamic models using difference equations, and linear production models of input-output analysis and activity analysis. 3 s.h. (w) ASSISTANT PROFESSOR MCKENZIE

244. **INTRODUCTION TO ECONOMETRICS.**—The theory of statistical model building in economics. The identifiability of parameters in a system of linear difference equations. The statistical estimation of parameters. The design of dynamic economic models. 3 s.h. (w) ASSISTANT PROFESSOR MCKENZIE

245. **PROBLEMS OF MODERN INDUSTRIALISM.**—Description and analysis of the growth of modern industrialism, of the structure and operation of large scale industry, of the inter-relations of industrial, political, and legal development, and of the implications for industry of the modern welfare state. 3 s.h. (w) PROFESSOR VON BECKERATH

256. **LABOR LEGISLATION AND SOCIAL INSURANCE.**—A study of the relations of the state to labor problems with special reference to remedial legislation, to interference in labor disputes, and to social insurance. Prerequisite: Economics 155 or with the consent of the instructor. 3 s.h. (w) PROFESSOR DE VYVER

257. **DYNAMICS OF THE LABOR MOVEMENT.**—A study of the forces which have shaped the growth of the labor movement. Special emphasis on the origin of modern trade unionism, relating its growth with western philosophic developments, and with the changing economic and social structure of society in Europe and America. 3 s.h. (w) ASSISTANT PROFESSOR CARTTER

262. **TRADE UNIONISM AND COLLECTIVE BARGAINING.**—An intensive survey of the trade union as an economic institution is followed by a study of the principles and problems of union-management relationship as found in collective bargaining. Prerequisite: Economics 155 or equivalent. 3 s.h. (w) PROFESSOR DE VYVER

265. INTERNATIONAL TRADE AND FINANCE.—A study of the fundamental principles of international trade and foreign exchange. Subjects covered will include international specialization, balance of payments, foreign investments, tariffs and commercial policies, exchange control, exchange rates, and international monetary problems. 3 s.h. (w)
PROFESSOR HUMPHREY

268. COMPETITIVE VERSUS MONOPOLISTIC ENTERPRISE.—A study of monopoly and imperfect competition as disturbances of a free, self-regulating market economy in an individualistic democratic political system; of the possibilities of public and private action respecting the preservation of these systems; and of the implications of planning and public welfare policies. 3 s.h. (w)
[Not offered in 1953-54.]
PROFESSOR VON BECKERATH

ACCOUNTING

57-58. PRINCIPLES OF ACCOUNTING.—Elementary principles of single proprietorship, partnership, and corporation accounting. Supervised laboratory periods will be assigned. 6 s.h. (w)
STAFF

60. GENERAL ACCOUNTING.—A one semester course in accounting principles designed for economics majors and other non-business administration students who desire some understanding of basic accounting concepts. This course must be taken in the sophomore or junior year. Students may not receive credit for both Course 60 and Course 57-58. 3 s.h. (w)

PROFESSOR DE VYVER; ASSOCIATE PROFESSOR LANDON;
ASSISTANT PROFESSOR DICKENS

147. ACCOUNTING FOR CONTROL.—This course traces the ways and means of executive control through statistics and industrial accounting. Emphasis is placed upon controlling business enterprises through cost accounting, financial reports, and other techniques. This course is not open to accounting majors. Prerequisite: Economics 57-58. 3 s.h. (w)
ASSOCIATE PROFESSOR JOERG; PROFESSOR BLACK

171-172. ADVANCED ACCOUNTING.—Advanced accounting theory and practice applied to the managerial problems of valuation and operation in corporations, consolidations, mergers, and liquidations. Open to students who have completed Economics 57-58. 6 s.h. (w)
ASSOCIATE PROFESSORS SHIELDS AND MANN

173-174. AUDITING, THEORY AND PRACTICE.—This course is primarily concerned with preparing the student to enter public accounting practice, but some attention is given to internal auditing. During the first semester, auditing techniques and methods are studied through the use of an audit practice set. The work of the second semester deals with matters of auditing and accounting policy examined from the standpoints of the supervising accountant, the business manager, and the investor. Prerequisite: Economics 171-172 and the permission of the department. 6 s.h. (w)
ASSOCIATE PROFESSOR MANN

175-176. C.P.A. REVIEW.—Thorough practice in classroom to prepare candidates for the Certified Public Accountant examination. The object is to train students to apply accounting principles and to work in classroom under substantially the same conditions as in the examination room. Practical accounting problems, auditing analysis and theory of accounts. Prerequisite: Economics 171-172 and permission of the department. 6 s.h. (w)
PROFESSOR BLACK

177. INCOME TAX ACCOUNTING.—A study of the accounting principles involved in the management of business enterprise under the requirements of Federal income tax laws. Practice is given in the preparation of tax returns. Prerequisite: Economics 171-172 or permission of the instructor. 3 s.h. (w)
ASSOCIATE PROFESSOR SHIELDS

178. ACCOUNTING SYSTEMS.—A presentation of the design and use of basic accounting procedures as applied to specialized business needs. Field trips to selected business units will be arranged. Prerequisite: Economics 171-172 and the permission of the department. 3 s.h. (w)
ASSISTANT PROFESSOR DICKENS

180. GOVERNMENT ACCOUNTING.—Accounting principles and methods used in the control and administration of governmental units. Emphasis is placed upon state, county, and municipal governments. Prerequisite: Economics 57-58 and permission of the instructor. 3 s.h. (w) ASSOCIATE PROFESSOR SHIELDS

275-276. ADVANCED INDUSTRIAL ACCOUNTING AND MANAGEMENT.—A comprehensive examination of the rationale and techniques of control methods used in industry. Emphasis is laid on a critical evaluation of the practices followed by job-order, process, and standard costing as well as the economics of overhead costs. Prerequisites; Economics 171-172 and permission of the Department. 6 s.h. (w)

PROFESSOR BLACK

BUSINESS ADMINISTRATION

11. ECONOMIC GEOGRAPHY.—A course in regional economic geography embracing the study of the world's major geographic regions, their present and potential production of food and raw materials for manufacture, and the relationship between these factors and the development of manufacturing industries, cities, and commerce. Offered both semesters. 3 s.h. (E & W) ASSOCIATE PROFESSOR LEMERT

105. INDUSTRIAL MANAGEMENT.—This course deals primarily with the elements and problems of managing the operations of an industrial firm. Topics treated include the functions and responsibilities of management, qualities required in executives, organization, location, the physical plant, materials control, the planning and control of operations, industrial and market research, personnel, budgeting, purchasing, and records and reports. Offered both semesters. 3 s.h. (w) ASSOCIATE PROFESSORS LONDON AND JOERG

109. THE ECONOMIC GEOGRAPHY OF LATIN AMERICA.—This course involves comprehensive study of the resources and people of Mexico, the West Indies, and Central and South America. Special emphasis is placed upon the possibilities and limitations of increases in trade between the United States and the leading Latin-American countries. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

115. FUNDAMENTALS OF GEOGRAPHY.—A study of geographic influences consisting of location, maps and their interpretation, climate, topography, soils, minerals, bodies of water, plants, animals, and the works of man. This course is required of all students in the Elementary School Teaching program, and is also recommended for those intending to specialize in foreign trade or the diplomatic service. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

116. PRINCIPLES OF ECONOMIC GEOGRAPHY.—A study of the economic resources of the world; the products of the agricultural and manufacturing industries; trade routes and trade centers; and influence of geographic factors on the economic development of nations. This course is recommended for those intending to specialize in foreign trade or the diplomatic service. Prerequisite: Economics 115. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

118. ECONOMIC GEOGRAPHY OF THE SOUTH.—A study of the agricultural, commercial, and industrial development, with special emphasis upon the expansion of Piedmont industries. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

120. ECONOMIC GEOGRAPHY OF THE PACIFIC.—The physical influences, natural resources, and economic activities of Asia, Oceania, and portions of the western coasts of North and South America with special emphasis upon their relationship to present developments. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

138. BUSINESS STATISTICS.—A survey of the principal statistical methods and their application to economics and business administration. The course deals with collection of statistical data, construction of statistical tables and charts, and a brief study of the fundamental statistical concepts and techniques. Offered both semesters. 3 s.h. (w) PROFESSOR HANNA; ASSOCIATE PROFESSOR SAVILLE

Open to juniors and to sophomores in the second semester. Not open to seniors except with the permission of the Director of Undergraduate Studies.

143. CORPORATION FINANCE.—Principles and problems in the financial organization of corporations; the study of corporate securities, the management of capital, the distribution of earnings; industrial combinations; insolvency and reorganization. Though not a prerequisite, Economics 57-58, Principles of Accounting, or Economics 60, General Accounting, are recommended to students electing this course. Offered both semesters. 3 s.h. (w)
ASSOCIATE PROFESSOR JOERG

144. INVESTMENTS.—A study of the investment policies of individuals and institutions; the securities markets; sources of investment information and data; the analysis and interpretation of financial statements. Prerequisites: Economics 57-58 or 60, and 143. 3 s.h. (w)
ASSOCIATE PROFESSOR JOERG

158. INSURANCE.—The development and basic principles of insurance. This course covers such topics as business uses, policy contracts, costs, and regulation of insurance. Life and fire insurance are emphasized. Offered both semesters. 3 s.h. (w)
ASSOCIATE PROFESSOR SAVILLE

168. MARKETING.—The topics covered in this course include the economic importance of markets and the marketing system; marketing functions; organization, and methods, price policies; finance; speculation; market research and the planning of marketing activities; co-operative marketing; criticism of marketing and means for improvement; and regulation. 3 s.h. (w)
ASSOCIATE PROFESSOR LONDON

181. BUSINESS LAW.—The fundamental principles of law as applied to routine business transactions. The topics presented are: contracts, negotiable instruments, forms of business organizations. *For seniors.* 3 s.h. (w)
ASSISTANT PROFESSOR DICKENS

182. BUSINESS LAW.—A continuation of 181. The topics presented are: agency, bailments, sales, and related principles. *For seniors.* 3 s.h. (w)
ASSISTANT PROFESSOR DICKENS

184. COMMERCIAL LAW FOR ACCOUNTANTS.—A review and summation of commercial law principles as they apply to accounting theory and practice. Emphasis will be placed upon the commercial law sections of the Certified Public Accountant examinations. Students are admitted to the course by permission of the instructor. *For seniors.* 3 s.h. (w)
PROFESSOR BLACK

188. PERSONNEL MANAGEMENT.—A study of the fundamental principles and problems of labor management and of collective bargaining under modern industrial conditions and under existing labor legislation. 3 s.h. (w)
PROFESSOR DE VYVER

191. BUSINESS POLICY.—An integrating course, where through analysis of a series of case problems from the top management viewpoint, the student is given practice in arriving at effective courses of action to solve business problems. To complete this course satisfactorily the student will be required to draw upon the institutional knowledge and techniques acquired in the other courses in the Department. Prerequisites: Business Administration requirements through the junior year. 3 s.h. (w)
STAFF

DEPARTMENTAL MAJORS

I. ECONOMICS

A. Prerequisites:

1. Students are urged although not required to take Mathematics 5 as partial fulfillment of the Minimum Uniform Requirements in the Natural Sciences and Mathematics.
2. Economics 51-52.

B. Number of hours needed: 24 hours in addition to Economics 51-52.

1. Required courses—Economics 149
Economics 153
2. Electives—18 semester hours of work in Economics (not Accounting or Business Administration) of which 9 semester hours shall be advanced course in the Department.

C. *Related Work:*

1. Number of hours needed: 18 hours.
2. Required courses: one of the following—

Economics 57-58	Principles of Accounting
Economics 60	General Accounting
Economics 138	Business Statistics
3. Departments in which related work is usually taken:
 Mathematics, Psychology, the social sciences and Business Administration.
 In special cases courses taken in other departments may be counted as related work with the approval of the department and the dean.

2. ACCOUNTING

For the requirements for a major in Accounting, see page 93 of this Bulletin.

3. BUSINESS ADMINISTRATION

For the requirements for a major in Business Administration, see page 93 of this Bulletin.

EDUCATION

PROFESSOR CARTWRIGHT, CHAIRMAN; PROFESSOR CARR, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSORS BOLMEIER AND CHILDS; ASSOCIATE PROFESSORS EASLEY, RUDISILL, STUMPF AND WEITZ; ASSISTANT PROFESSORS COLVER, INGLES, JACOBANSKY, MASSEY, McLENDON, PETTY, RAPPAPORT, REYNOLDS, AND ZUKOWSKI; AND ASSISTANTS

Courses in the Department of Education are designed for two groups of students: (1) students with teaching experience or others who have definitely chosen teaching as their life-work, and (2) students who desire to study the school as an outstanding social institution. The courses listed in Nursing Education are for students preparing to teach in schools of nursing.

Students who do not expect to teach but merely desire an understanding of the school as part of a liberal education are advised to elect such courses as 84 and 88 for their introductory work in the Department and then to elect further work in accordance with their special interests. Students who expect to teach in the public schools should plan their courses in accordance with the general regulations set forth under Teaching on page 94 of this catalogue. *All prospective teachers must enroll in courses 84 and 88, preferably beginning before their junior year. They are then required to complete courses 103, 118, and 101-102 or 115-116 in their senior year.*

1. ORIENTATION IN STUDY AND STUDY HABITS.—A course for freshmen whose high-school and other records indicate the need for help in working out satisfactory study methods and in adjusting to college life. Note-taking from reading and lectures, time planning, remedial reading, and pertinent principles of the psychology of learning are among the matters considered. *Either semester.* 3 s.h. (w)

5. DEVELOPMENTAL READING.—A course consisting of study and practice for the improvement of the reading and study skills. Work is provided in such areas as vocabulary, speed of comprehension, critical interpretation, organization of ideas, and versatility of method in reading for different purposes. 3 s.h. (w)

ASSOCIATE PROFESSOR RUDISILL

84. SOCIAL FOUNDATIONS OF EDUCATION.—This course is the first of four intended to give the student a thorough survey of the place and function of education and an understanding of the school as a social institution. It is an introductory course emphasizing those historical, philosophical, and sociological factors which explain trends in American education. *Either semester.* 3 s.h. (w & e)

PROFESSOR CARTWRIGHT; ASSOCIATE PROFESSOR STUMPF AND
 ASSISTANT PROFESSOR McLENDON

NOTE: Courses 84, 88, 103, and 118 constitute a sequence of 12 hours in Education required of all prospective teachers. Students who intend to teach in the elementary school should confer with Professors Carr or Petty and students who

intend to teach in the secondary school should confer with Professors McLendon or Reynolds in order to work this sequence into their schedules. See courses under Nursing Education for modified sequence of courses for students preparing to teach in schools of nursing.

88. EDUCATIONAL PSYCHOLOGY: LEARNING AND MEASUREMENT.—This course and Education 118 constitute a general introduction to the field of Educational Psychology. This course deals with (1) the psychology of learning, including: the nature of the learning process; general principles or laws of learning; the course of learning and forgetting; factors influencing efficiency in learning and retention; and the transfer of training; and (2) measurement, including: the basic concepts in the measurement of intelligence; standardized achievement tests; the extent and significance of individual differences in ability and performance. Opportunity will be afforded for examination and study of a variety of tests of intelligence and achievement. *Either semester.* 3 s.h. (E)

ASSOCIATE PROFESSORS EASLEY AND RUDISILL;
AND ASSISTANT PROFESSOR PETTY

See note following course 84.

101-102. ELEMENTARY EDUCATION: PRINCIPLES AND PRACTICE.—The study of the nature, subject matter, and methods of elementary education. The course is designed to give prospective elementary teachers an understanding of basic principles and practices in the organization of instruction and of subject matter for the primary and grammar grades of the public school. Students may elect primary or grammar-grade work, according to their special interests. The specific problems which arise in the student teachers' experiences are treated in group and individual conferences. *For seniors only.* 9 s.h. (E)

PROFESSOR CARR AND ASSISTANT PROFESSOR PETTY

NOTE: Education 101-102, 103, and 118 constitute a semester's work during the senior year.

103. ORGANIZATION AND MANAGEMENT OF THE SCHOOL.—An introduction to the problems of school organization and administration which are of particular concern to the classroom teacher. Although federal and state control over education is briefly reviewed, the main consideration is the local school system. Considerable attention is given to the administration of teaching personnel, pupil personnel, and the program of studies. *Either semester.* 3 s.h. (E)

PROFESSOR BOLMEIER AND ASSISTANT

See notes following course 84, 101-102, 115-116.

115-116. SECONDARY EDUCATION: PRINCIPLES AND PRACTICE.—A study of the nature, scope, and methods of secondary education, emphasizing fundamentals of the teaching process and exemplifying theory by practice. Students preparing to teach in the junior high school are permitted to concentrate in that field. *Since practice-teaching facilities are limited, students with superior records will be given preference in practice teaching.* *For seniors only.* 9 s.h. (E)

ASSISTANT PROFESSOR MCLENDON AND ASSISTANTS

NOTE: Education 115-116, 103, and 118 constitute a semester's work during the senior year.

118. EDUCATIONAL PSYCHOLOGY: PSYCHOLOGICAL DEVELOPMENT.—This course traces the psychological development of the individual from infancy to maturity. The principal topics considered are: the interdependence of hereditary and environmental factors in development, the nature of the development process, the establishment of the early basic patterns of behavior, changes and conditions producing these changes throughout childhood and adolescence to maturity, and the origin and treatment of minor behavior disorders. To the degree practicable, students will observe children in typical and atypical situations as a means of securing concrete data on the problems treated in the course. Not open to students who have had Psychology 121 or 126. Prerequisite: three semester hours in psychology or educational psychology. *Either semester.* 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

See notes following course 84, 101-102, 115-116.

142. CHILDREN'S LITERATURE.—Students enrolled will be allowed to specialize in literature of either the primary or the grammar grades. 3 s.h. (E)

PROFESSOR CARR AND ASSOCIATE PROFESSOR RUDISILL

161. INTEGRATED ART IN THE PUBLIC SCHOOL.—This course consists of three semester hours of work in materials and methods. (Required of all students intending to teach in the elementary school.) *For juniors and seniors.* 3 s.h. (E)

MR. STARS

162. PLASTIC ART IN THE PUBLIC SCHOOL.—Basic sculpture and ceramics for students in elementary and secondary art education. This course will provide credit towards the North Carolina Elementary or Secondary Teaching Certificate. 3 s.h. (E)

MR. STARS

164. VOCAL MUSIC IN THE PUBLIC SCHOOL.—Materials and methods of teaching vocal music in the junior and senior high schools; emphasis on organization, administration, and performance of school choirs and ensembles; care of the changing voice. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

166. INSTRUMENTAL MUSIC IN THE PUBLIC SCHOOL.—Materials and methods of teaching instrumental music in the junior and senior high schools; emphasis on teaching technics, repertoire, organization, and administration of the instrumental curriculum. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

201. TEACHING AND SUPERVISION OF ARITHMETIC.—Special attention is given to the number system, the fundamental operations (with whole numbers, fractions, and decimals), percentage, and measurements. Considered also are the meaning theory, methods of teaching, problem solving, evaluation, practice and drill, and selection and gradation of arithmetical contents. The course is designed for teachers and supervisors in the elementary school. 3 s.h. (E)

ASSISTANT PROFESSOR PETTY

203. PRINCIPLES OF SCHOOL ADMINISTRATION.—The fundamental facts and procedures of school administration, an analysis of the problems and policies of the organization and direction of a local school system and the functions of the various school officials. Prerequisite: six semester hours in education. 3 s.h. (E)

PROFESSOR BOLMEIER

205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION.—A consideration of the aims and objectives of secondary school subjects, emphasizing practical problems of curriculum-making in the high school. 3 s.h. (E)

PROFESSOR CHILDS

208A. MENTAL TESTS AND APPLICATIONS.—A study of the development of intelligence testing, the concept of general intelligence, various recent applications of mental tests and training in the giving of individual tests. Prerequisite: course 258 or six semester hours of other work in educational psychology or psychology. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

208B. MENTAL TESTS AND APPLICATIONS.—A continuation of course 208A intended to provide experience in the administration of mental tests and in the interpretation of data. Open only to students approved by the instructor. 2 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

209. STATISTICAL METHODS APPLIED TO EDUCATION.—A study of statistical methods of treating educational and social data designed to enable teacher or administrator to interpret and use the results of scientific investigations in education. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

213. PROBLEMS IN THE ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL.—A study of the work of the elementary school principal. 3 s.h. (E)

215. EDUCATIONAL AND VOCATIONAL GUIDANCE.—A survey of the literature on guidance with special reference to secondary education; a critical study of the principles and techniques used in guidance; an attempt to locate the problems most urgently in need of solution. Prerequisite: 12 semester hours in the Department. 3 s.h. (E)

PROFESSOR CHILDS

224. TEACHING THE SOCIAL STUDIES IN ELEMENTARY SCHOOLS.—

This course treats objectives, curriculum trends, methods, and materials in elementary-school social studies. Topics receiving emphasis include unit-planning, use of textbook, the reading program, the using of community resources, audio-visual materials, dealing with controversial issues, teaching time and place concepts, and evolution. Opportunity is provided for teachers to work on their own school problems in the social studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

225. THE TEACHING OF HISTORY AND THE SOCIAL STUDIES.—Evaluation of the objectives, content, materials, and methods in the teaching of History and the Social Studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

226. TEACHING READING IN THE ELEMENTARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. Practice is provided with elementary-school children suffering reading retardation, in testing, diagnosis, and daily remedial teaching. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

227. THE PSYCHOLOGY OF LEARNING: PROBLEMS.—The major problems related to the learning process will be examined with the experimental literature bearing on them. The curves of learning and forgetting, the distribution of practice, economical methods of learning, and the transfer of training will be the major topics considered. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

[Not offered in 1954-55]

232. SUPERVISION OF INSTRUCTION.—A survey of supervision as a means of improving instruction and adapting the curriculum to the learner and to community needs. 3 s.h. (E)

PROFESSOR CARR

234. SECONDARY-SCHOOL ORGANIZATION AND ADMINISTRATION.—This course is designed especially for principals, teachers, and other prospective members of the secondary-school staff. The scope of secondary education is considered to encompass junior high school, regular high school, senior high, and junior college. Special treatment is given to the problems of internal organization and management. 3 s.h. (E)

PROFESSOR BOLMEIER

236. TEACHING READING IN THE SECONDARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. Practice is provided with secondary-school children suffering reading retardation, in testing, diagnosis, and daily remedial teaching. For secondary-school teachers of all subjects who wish to improve the reading and study habits of their students. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

246. THE TEACHING OF MATHEMATICS.—This course deals with such topics as aims, curriculum, course and lesson planning, and classroom procedure for teaching secondary-school mathematics. 3 s.h. (E)

ASSISTANT PROFESSOR REYNOLDS

253. SCHOOL LAW.—The primary purpose of this course is to familiarize prospective school administrators and teachers with the legal features of school organization and administration. Although some attention is given to constitutional and statutory provisions, the main emphasis is upon court decisions relating to education. Students are expected to select appropriate problems in school law for intensive study. 3 s.h. (E)

PROFESSOR BOLMEIER

255. GUIDANCE FUNCTIONS OF THE CLASSROOM TEACHER.—A consideration of the philosophy, methods and tools of guidance appropriate to the classroom teacher. This course is designed for students who do not plan to become guidance specialists, but who wish to apply the principles and techniques of guidance. Prerequisites: twelve hours in either education or psychology, or a combination of the two. 3 s.h. (E)

ASSOCIATE PROFESSOR WEITZ

258. EDUCATIONAL MEASUREMENTS.—A critical study of the principles and techniques involved in measurement in education with opportunity for individual research. Prerequisite: 12 semester hours in the Department, including a course in educational psychology. 3 s.h. (E)

ASSOCIATE PROFESSOR WEITZ

267. THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL.—This course deals with such topics as aims and values, curriculum materials, classroom and laboratory procedures, field trips, lesson planning, and grade placement for science teaching in the elementary school. 3 s.h. (E) ASSISTANT PROFESSOR REYNOLDS

276. THE TEACHING OF HIGH-SCHOOL SCIENCE.—Discussion, lectures and collateral reading, related to such topics as aims, tests, curriculum, classroom and laboratory procedure, field trips, course and lesson planning for secondary-school science. 3 s.h. (E) ASSISTANT PROFESSOR REYNOLDS

290. ADMINISTRATION OF SCHOOL PROPERTY.—Planning and management of the school plant and its equipment to meet instructional, health, and community needs for immediate and long-range purposes. This course is intended for teachers and principals as well as for superintendents. Areas to be treated include site selection; trends in design, lighting, ventilation and heating; custodial service and maintenance; and financing. 3 s.h. (E) ASSOCIATE PROFESSOR STUMPF

NURSING EDUCATION

Students preparing for administrative, teaching, or supervisory positions in schools of nursing must take, in addition to other courses, substantially the same basic program of work in Education as do prospective secondary school teachers, namely, courses 84, 88, 103, 115-116, and 118. Course 101N below is substituted for course 103 in this program. Courses 84N and 115N-116N are sections of courses 84 and 115-116, respectively, designed especially for nurses.

84N. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—A special section of Education 84, applied to Nursing Education. A survey of major historical, philosophical, and sociological factors which have affected developments in nursing and nursing education. The purpose of the course is to give the student a better understanding of the place of nursing in present day society and the responsibilities of the individual nurse toward that society. 3 s.h. (w)

ASSISTANT PROFESSOR RAPPAPORT

101N. THE CURRICULUM IN THE SCHOOL OF NURSING.—The general principles of curriculum making and the factors which determine the content and organization of the nursing school curriculum are considered in this course. 3 s.h. (w)

ASSISTANT PROFESSOR INGLES

115N-116N. NURSING EDUCATION: PRINCIPLES AND PRACTICE.—A special section of Education 115-116. Principles of teaching applied to the nursing school situations and the planning and evaluation of instruction. Ninety hours of observation and of supervised teaching in the Duke University School of Nursing are required. Four hours of conference, observation, and practice teaching are required each week. Before beginning practice teaching students must complete thirty hours of observation. 8 s.h. (w)

ASSISTANT PROFESSOR RAPPAPORT

[Not open to students who have had course 115-116.]

117N. COMMUNITY NURSING SERVICE.—Designed for administrators, teachers, and supervisors in schools of nursing. Emphasis is on the integration of outpatient departments and community social and health agencies into the nursing school curriculum and on the preparation of nurses for community service. 3 s.h. (w)

ASSISTANT PROFESSOR MASSEY

120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. 3 s.h. (w)

ASSISTANT PROFESSORS INGLES AND ZUKOWSKI

124N. NURSING EDUCATION: TEACHING OF THE NURSING ARTS.—In this course an effort is made to help prospective teachers to integrate the facts and principles of the natural, social, and medical sciences into the teaching of nursing arts. Though major emphasis is placed upon problems which are involved in teaching the first course, the concept of the nursing arts as an integral part of each clinical area is stressed. 3 s.h. (w)

STAFF

130N. PSYCHOSOMATIC NURSING.—A study of the close relationship between mind and body in all illness, and of the techniques of observation and interview, both experimental and therapeutic. Lectures, clinics, conferences, discussions and experience with patients. 4 s.h. (w)
ASSISTANT PROFESSOR ZUKOWSKI

131N-132N. PSYCHIATRY AND PSYCHIATRIC NURSING.—An advanced study with special emphasis on personality development and the preventive and therapeutic aspects of psychiatry and psychiatric nursing. In the second semester the management of practical situations of increasing complexity is stressed. Lectures, clinics, conferences, discussions and experience with patients. 8 s.h. (w)
ASSISTANT PROFESSOR ZUKOWSKI

133N. SEMINAR IN PSYCHIATRIC NURSING.—Special study of areas such as behavior problems of children, projective tests, group therapy, mental hygiene clinics, etc. 3 s.h. (w)
ASSISTANT PROFESSOR ZUKOWSKI

134N-135N. ADVANCED MEDICAL AND SURGICAL NURSING.—A study of the medical and surgical aspects of selected diseases, aimed at giving the student a better comprehension of the total care necessary to bring about the best possible results for patients. Lectures, discussions, case histories, and planned observation and experience with patients. 8 s.h. (w)
ASSISTANT PROFESSOR INGLES

136N. SEMINAR IN MEDICAL OR SURGICAL SPECIALTY.—Directed study in a selected medical or surgical specialty. Each student works on a problem of major interest to her. Individual research in the collection of original material. 3 s.h. (w)
ASSISTANT PROFESSOR INGLES

192N. PRINCIPLES AND METHODS OF TEACHING IN SCHOOLS OF NURSING.—The primary purpose of this course is to help teachers in schools of nursing to understand and to utilize generally accepted principles of learning and to carry out a more effective teaching program in a school of nursing. Instruction is given in the planning of courses, in methods of teaching in classrooms and in hospital divisions, in construction of examinations, and in the utilization of other methods of determining the effectiveness of a teaching program. 3 s.h.
ASSISTANT PROFESSOR RAPPAPORT

193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better to understand their functions in planning and managing a program on a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel, and a more adequate teaching program for students and others. 3 s.h. (w)
ASSISTANT PROFESSOR INGLES

195N. PERSONNEL WORK IN SCHOOLS OF NURSING.—The primary purpose of this course is to help head nurses and supervisors to develop greater understanding of the principles of human behavior and greater ability to apply these principles in working with patients and others on hospital divisions, and in establishing cooperative relationships with other departments of the hospital. 3 s.h. (w)
ASSISTANT PROFESSOR JACOBANSKY

DEPARTMENTAL MAJOR

Major Requirements: 1. Number of hours needed; 24 hours in the Department. 2. Required courses: 84, 88, 103, 118. 3. Recommended courses: for elementary teachers, Education 101-102, 142. For secondary teachers, Education 115-116 and materials and methods in teaching of related work.

Related Work: Sufficient work in subjects to be taught to meet certification requirements in state in which student intends to teach.

MATERIALS AND METHODS COURSES

Certain courses concerned with materials and methods in teaching the various subjects in the public school curriculum are listed in the proper subject matter department. These courses are intended to give credit on teaching certificates and are recommended by the Department of Education for such credit.

ENGLISH

PROFESSOR IRVING, CHAIRMAN; ASSOCIATE PROFESSOR BEVINGTON, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR BOWMAN, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS BAUM, BLACKBURN, BOYCE, BRINKLEY, GILBERT, GOHDES, HUBBELL, SANDERS, TURNER, AND WARD; ASSOCIATE PROFESSORS MITCHELL, PATTON, AND REARDON; ASSISTANT PROFESSORS BEVINGTON, BUDD, HARWELL, JORDAN, POTEAT, SCHWERMANN, SUGDEN, WETHERBY, WHITE, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MESSRS. BROOKS, HOLMES, KEIRCE, MAJOR, NICHALAK, MULDER, NEWELL AND PADGETT

L. ENGLISH FUNDAMENTALS.—All freshmen whose scores on the placement tests indicate that they are not ready for English 1 must take this course. Students who fail in English 1 must repeat the course. Students who have earned credit in English 1 must also take English 1 and 2. 3 s.h. (w)

ASSISTANT PROFESSOR JORDAN AND MR. NEWELL

1-2. ENGLISH COMPOSITION.—All freshmen are required to take course 1 and course 2. (For exemptions, see Uniform Course Requirements, p. 91.)

Students who fail in English 1 or 2 must repeat the course in the following semester. Students in courses 1 and 2 who fail to make an average of "C" or better are strongly advised to earn credit for an additional course in English composition. 6 s.h. (E & W)

PROFESSOR WARD; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, BUDD, HARWELL, JORDAN, POTEAT, SUGDEN, WHITE, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MESSRS. BROOKS, HOLMES, KEIRCE, MAJOR, MULDER, NEWELL, AND PADGETT

33. WRITING LABORATORY.—A non-credit course in elementary composition which may be elected by students who need it, or may be required of certain students under the conditions stated on page 89, "Deficiencies in Composition." Students may enter or leave this course at any time, at the instructor's discretion. (w)

ASSISTANT PROFESSORS HARWELL AND JORDAN

53. ENGLISH COMPOSITION.—A course in advanced composition and grammar. Emphasis is placed first on the student's mastering the fundamental principles of English grammar and the other essentials of correct writing. Weekly themes are required. 3 s.h. (w)

ASSISTANT PROFESSOR JORDAN

65-66. ENGLISH COMPOSITION.—A foundation course in imaginative writing, both prose and verse. Open to sophomores and in special cases to freshmen. The consent of the instructor is required. 6 s.h. (E)

PROFESSOR SANDERS

E-93. ADVANCED COMPOSITION FOR ENGINEERS.—This course concentrates on those forms of writing most needed by men in technical fields, especially engineers. Among other types of writing, it includes business letters, technical reports, and semi-technical articles. Open to non-engineering students only upon consent of the instructor. Prerequisite: English 1 and 2. 3 s.h. (w)

ASSISTANT PROFESSOR HARWELL AND MR. HOLMES

101-102. EXPOSITORY ENGLISH COMPOSITION.—The course attempts to encourage fluency and accuracy in expository expression. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 6 s.h. (E)

ASSOCIATE PROFESSOR MITCHELL

103-104. ENGLISH COMPOSITION.—A course in descriptive and narrative writing. Class discussion of students' manuscripts, supplemented by a critical evaluation of a few selected short stories and by individual conferences with the instructor. Open to sophomores, juniors, and seniors. The consent of the instructor should be secured as early as possible in the spring semester. Prerequisites for English 104: English 103. 6 s.h. (E)

PROFESSOR BLACKBURN AND DR. BOWERS

107-108. JOURNALISM.—The first semester is devoted to news-writing and copy-reading; the second semester to the writing of feature articles and editorials. 6 s.h. (w)

ASSISTANT PROFESSOR SUGDEN

SPEECH AND DRAMA

118. **PERSUASIVE SPEAKING.**—The psychological and sociological techniques used in gaining acceptance of ideas through speech. Study is made of the factors influencing human behavior; audience analysis and motivation; choice, arrangement, and adaptation of material. Extensive practice in persuasive speaking. Prerequisite: English 151 or consent of the instructor. 3 s.h. (w) ASSISTANT PROFESSOR WETHERBY

119. **HISTORY OF THE THEATRE.**—The origin and development of drama, acting, and stagecraft from ancient Greece to the modern European and American theatre. Production problems of representative plays of the various periods will be discussed. Primarily for juniors and seniors, open also to sophomores approved by the instructor. 3 s.h. (ε) ASSOCIATE PROFESSOR REARDON

121. **STAGECRAFT.**—An introductory course on the technical aspects of play production: scenery, lighting, properties, make-up, and costuming. Lectures and laboratory. Laboratory work will be coordinated with the various productions of the Duke Players. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 3 s.h. (ε)

ASSOCIATE PROFESSOR REARDON AND MR. MICHALAK

122. **PLAY PRODUCTION.**—An introduction to the methods of producing a play: theatre organization, play selection, casting, and rehearsal. Lectures and laboratory. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 3 s.h. (ε) ASSOCIATE PROFESSOR REARDON AND MR. MICHALAK

139. **THE SPEAKING VOICE.**—The correction of minor functional speech disorders. The speech organs and their function. The International Phonetic Alphabet and its use. Drill in pronunciation, diction, vocal quality. Primarily for sophomores, juniors, and seniors; also open to freshmen with the consent of the instructor. 3 s.h. (ε & w) ASSISTANT PROFESSORS SCHWERMANN AND WETHERBY
[Offered both semesters]

150. **ORAL INTERPRETATION OF LITERATURE.**—A study of poetry and certain types of prose, with practice in the technique by which they may be communicated to an audience. 3 s.h. (w) ASSISTANT PROFESSOR SCHWERMANN

151. **ESSENTIALS OF PUBLIC SPEAKING.**—A basic course in public speaking, designed to give the student the poise and confidence necessary to think and speak freely before an audience. Particular attention is paid to the gathering and organization of speech materials and to oral presentation. 3 s.h. (ε & w)

ASSOCIATE PROFESSOR REARDON; ASSISTANT PROFESSORS SCHWERMANN, AND WETHERBY; MR. MICHALAK
[Offered both semesters]

152. **ARGUMENTATION.**—The principles of argumentation and debating. The techniques of analysis, investigation, evidence, reasoning, brief making, and refutation. Participation in class discussions and debates. Prerequisite: English 151 or consent of the instructor. 3 s.h. (w) ASSISTANT PROFESSOR WETHERBY
[Offered in the fall semester]

171, 172. **RADIO BROADCASTING.**—The theory and practice of radio broadcasting. The purpose, preparation, and production of various types of radio programs. There will be experience before a microphone in a studio situation. Laboratory work both semesters. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 6 s.h. (w)

ASSISTANT PROFESSOR WETHERBY AND MR. MICHALAK

ENGLISH AND AMERICAN LITERATURE AND LANGUAGE

55, 56. **REPRESENTATIVE WRITERS.**—The following works are studied in the first semester: Chaucer's Prologue to *The Canterbury Tales* and at least two tales, Shakespeare's *1 Henry IV*, *King Lear*, and one other play, the English Bible (selections), Milton's *Paradise Lost* (selections) and some of the shorter poems; in the second semester: Pope's poems (selections), Fielding's *Joseph Andrews* or *Tom Jones*, selections from Keats's or Wordsworth's poems, selections from Browning's or Arnold's poems, Thackeray's *Vanity Fair* or Hardy's *The Mayor of Casterbridge*,

selections from Yeats's poems, two plays by Shaw or a twentieth-century British or American novel. 6 s.h. (E & W)

PROFESSORS BLACKBURN, BOYCE, SANDERS, AND TURNER; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, POTEAT, SUDGEN, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MR. MULDER

111, 112. EIGHTEENTH-CENTURY LITERATURE.—A study of the leading English poets, essayists, dramatists, and novelists from Swift to Blake, with the literary and social background. The major writers studied in the first term are Pope, Swift, Fielding, and Thomson; in the second term, Johnson, Goldsmith, Cowper, and Blake. Tests, discussions, and reports on outside readings. 6 s.h. (E)

PROFESSOR BOYCE

117. MILTON.—Milton's poetry and prose, together with their relation to the period and to other great works of literature. Lectures, discussion, occasional tests, one or two papers. 3 s.h. (E)

PROFESSOR BRINKLEY

123, 124. SHAKESPEARE.—In the first semester twelve plays, before 1600; in the second semester ten plays, after 1600. Occasional tests and one or two papers. 6 s.h. (E & W)

PROFESSORS BOYCE AND WARD; ASSOCIATE PROFESSOR BOWMAN; DR. FRASER

125, 126. ENGLISH LITERATURE, 1789-1832.—The course begins with selections from the poetry of the forerunners of Romanticism. The chief emphasis in the first semester is on the work of the older Romantics: Wordsworth, Coleridge, Southey, Scott, and Lamb. In the second semester the chief emphasis is on the work of the younger Romantics: Byron, Shelley, Keats, Leigh Hunt, Hazlitt, and DeQuincey. Informal lectures and class discussion of assigned texts. A limited amount of outside reading is required and also some memory work. There are four tests each semester. 6 s.h. (E & W)

ASSOCIATE PROFESSORS BEVINGTON AND PATTON; MR. BROOKS

129, 130. ENGLISH NOVEL.—The work of the first semester covers the history of the novel through Scott; that of the second semester, from Dickens through Hardy. Lectures and book reports. 6 s.h. (E)

ASSOCIATE PROFESSOR MITCHELL

131, 132. ENGLISH LITERATURE, 1832-1900.—A study of the chief English writers' of poetry, prose, and drama from Carlyle to Yeats. The major writers studied in the first semester are Carlyle, Tennyson, Browning, Macaulay, Mill, Newman, and Arnold; in the second semester, Ruskin, the Rossettis, Morris, Swinburne, Shaw, and Yeats, with selections from minor writers. Collateral reading from novels of the period. Lectures, discussions, tests, and a term paper. 6 s.h. (E & W)

PROFESSOR SANDERS AND ASSOCIATE PROFESSOR BEVINGTON

134. CONTEMPORARY POETRY.—A reading course in the poetry of the twentieth century in England, Ireland, and America, beginning with Gerard Manley Hopkins, and William Butler Yeats. An anthology of modern poetry is read and discussed, supplemented by the wider reading of individual poets. Informal lectures and discussions with a critical paper for the term. Open to juniors and seniors, and occasionally to sophomores by special permission. 3 s.h. (E)

ASSISTANT PROFESSOR BEVINGTON

137, 138. AMERICAN LITERATURE.—A survey of American literature from colonial times to the present. Selections from the works of important authors are read, from Cotton Mather to Eugene O'Neill, and complete novels by Hawthorne, Melville, James, Howells, and others. The work of the first semester ends with the Civil War period. Lectures, monthly tests, and a term paper each semester. 6 s.h. (E & W)

PROFESSORS GOHDES, HUBBELL, AND TURNER; ASSISTANT PROFESSOR BUDD; VISITING LECTURER WOODRESS

141. CHAUCER.—*The Canterbury Tales* and the minor poems, with attention to their literary, social, and religious background. Lectures, discussions and reports. 3 s.h. (W)

DR. KOTTLER

142. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL ENGLISH.—A course in the materials and methods of teaching high school English, planned by the Southern Association of Colleges and Secondary Schools, for the purpose of familiarizing prospective teachers with both the subject matter and the methods of teaching. 3 s.h. (E) ASSISTANT PROFESSOR JORDAN

143, 144. ENGLISH LITERATURE: ELIZABETHAN AND EARLY SEVENTEENTH CENTURY.—A study of the prose, poetry, and drama of the period. First semester: the emphasis in prose is on Sidney; in poetry, on Spenser and Shakespeare; in drama, on Marlowe and Jonson. Second semester: the emphasis in prose is on the English Bible, Bacon, Browne; in poetry, on Donne and on the early poems of Milton; in drama, on Webster and Ford. Lectures, tests, and one or two brief papers. 6 s.h. (E) PROFESSOR BLACKBURN AND ASSISTANT PROFESSOR WILLIAMS

153, 154. COMPARATIVE LITERATURE.—Important works in European literature are read in translation and related to similar documents in English literature. In the first semester are read: nine Greek tragedies, five of Plato's *Dialogues*, Vergil's *Aeneid*, Dante's *Inferno*, and Cellini's *Autobiography*; in the second semester, Machiavelli, Cervantes, Molière, Voltaire's *Candide*, Goethe's *Faust*, Dostoevski's *The Brothers Karamazov*, Ibsen's plays. Discussions, tests, reports. 6 s.h. (E) PROFESSOR IRVING

155. MODERN EUROPEAN DRAMA.—The emphasis is on Ibsen, Strindberg, and Chekhov, and on the Free Theatre movements. Some quite recent plays will also be studied. 3 s.h. (E) ASSISTANT PROFESSOR WHITE

156. MODERN BRITISH AND AMERICAN DRAMA.—Types of drama are studied in relation to European origins and to contemporary scene. The students subscribe to *Theatre Arts*. 3 s.h. (E) ASSISTANT PROFESSOR WHITE

158. CONTEMPORARY FICTION.—Wide reading in twentieth-century novelists, with special attention to innovations in form and technique. Lectures, discussions, and weekly critical reports. 3 s.h. (w) DR. SMITH

160. ENGLISH LITERARY BIOGRAPHY.—A reading course in great biographies. Studied are works of Plutarch, Walton, Johnson, Southey, Lockhart, Henry Adams, and Strachey. Lectures, discussions, reports, tests. 3 s.h. (E) PROFESSOR SANDERS

161, 162. MODERN ENGLISH AND ITS BACKGROUNDS.—An elementary historical and descriptive study of the English language: patterns of change and growth, standards of usage and pronunciation. Some attention is given to the methods of linguistic inquiry and to the relations of philology to literary studies. The first semester is devoted chiefly to a historical study of written and spoken English, the second to a description of modern American English. Lectures, discussions, and short reports. 6 s.h. (E) DR. KOTTLER

165. AMERICAN FICTION.—A survey of fiction in America from its beginnings to 1870, with emphasis on the development of the short story. Lectures, discussions, and frequent written reports. 3 s.h. (E) ASSISTANT PROFESSOR BUDD

166. AMERICAN FICTION.—A survey of fiction in America from 1870 to the present, with emphasis on the local color movement and the rise of realism. Lectures, discussions, and frequent written reports. 3 s.h. (E) ASSISTANT PROFESSOR BUDD

FOR SENIORS AND GRADUATES

201-202. ANGLO-SAXON.—In the first semester, an introduction to the language, with the reading of selected prose and of some of the shorter poems; in the second semester, the *Beowulf*. 6 s.h. (w) PROFESSOR BAUM

203-204. CHAUCER.—Reading and interpretation of the text: in the first semester the principal *Canterbury Tales*; in the second, the *Troilus* and the minor poems. A reading report and a term paper. 6 s.h. (w) PROFESSOR BAUM

205-206. MIDDLE ENGLISH.—Close study of selected texts, with attention to the development of the language and to the history of the literature from 1200 to 1400. A term paper each semester. 6 s.h. (w) PROFESSOR BAUM
[Not offered in 1954-55]

215, 216. ELIZABETHAN DRAMA.—Careful study of one or two major dramatists (Jonson or Beaumont and Fletcher) and extensive reading in the other writers (Heywood, Ford, Massinger, Marlowe, Middleton) with emphasis on the nature and qualities of their work in relation to its historical background. Exposition of plays, reports, and a term paper each semester. 6 s.h. (w) PROFESSOR GILBERT

217. MILTON.—Milton's poetry and prose, with emphasis on the major poems. 3 s.h. (w) PROFESSOR GILBERT
[Not offered in 1954-55]

218. SPENSER.—The reading of Spenser's works, with chief attention to *The Faerie Queene*. 3 s.h. (w) PROFESSOR GILBERT

219, 220. THE EIGHTEENTH CENTURY.—Swift, Pope, Defoe, Addison, Steele, and others are studied in the first semester; in the second, Gray, Johnson, Boswell, Goldsmith, the letter writers, and the early Romantic poets. Lectures, oral reports, and a term paper each semester. 6 s.h. (w) PROFESSOR IRVING

221, 222. ENGLISH LITERATURE OF THE EARLY NINETEENTH CENTURY.—A survey of the principal writers and literary monuments from 1798 to 1830; in the first semester chiefly Wordsworth, Coleridge, and Lamb; in the second, Shelley, Byron, Keats, and Hazlitt. Occasional lectures, frequent classroom discussions of reading assignments, written and oral reports, and a term paper each semester. 6 s.h. (w)
[Not offered in 1954-55]

223, 224. ENGLISH LITERATURE OF THE LATER NINETEENTH CENTURY.—Some of the most important works of the period are discussed; the background is filled in by lectures and assigned reading. The first semester is devoted chiefly to Carlyle, Dickens, Thackeray, Tennyson, and Browning; the second semester to Arnold, Ruskin, Pater, George Eliot, Meredith, the Pre-Raphaelites, and Swinburne. A term paper each semester. 6 s.h. (w) PROFESSOR BAUM
[Not offered in 1954-55]

227. LITERARY CRITICISM.—A study of the Greek and Roman critics, in chronological order but with emphasis on their permanent value rather than on the mere history; also the Continental and English critics to about 1700. Lectures, reports, and a term paper. 3 s.h. (w) PROFESSOR GILBERT

229, 230. AMERICAN LITERATURE, 1800-1870.—The writers emphasized in the first semester are Emerson, Thoreau, and Hawthorne; in the second semester, Poe and Melville. In the first semester some attention is given also to Edwards, Franklin, Bryant, Longfellow, Holmes, Whittier, Lowell, and Parkman; and in the second semester, to Byrd, Jefferson, Paine, Freneau, Brown, Irving, Cooper, Kennedy, Simms, Timrod, and Lincoln. An oral report and a term paper in the first semester. 6 s.h. (e) PROFESSORS HUBBELL AND TURNER

231. EMERSON.—A study of Emerson's ideas as reflected in selected examples of his essays and poems. 3 s.h. PROFESSOR GOHDES

232. WHITMAN.—A detailed study of *Leaves of Grass* and of selected prose works. One test and one term paper. 3 s.h. (e) PROFESSOR GOHDES
[Not offered in 1954-55]

233. AMERICAN LITERATURE 1870-1900.—Selected works of the chief authors of the period, including Whitman, Lanier, Mark Twain, James, Howells, Crane, and Emily Dickinson. The lectures will deal with the social background as well as the literary trends and the careers of the major authors. One test and one term paper. 3 s.h. PROFESSOR TURNER

234. AMERICAN LITERATURE OF THE TWENTIETH CENTURY.—Selected works of representative authors, including Dreiser, Edith Wharton, Mencken, Lewis, Willa Cather, O'Neill, Robinson, Frost, Eliot, Hemingway, and Faulkner. The lectures will deal primarily with literary trends as shaped by the social background. One test and one term paper. 3 s.h. PROFESSOR GOHDES

239. SHAKESPEARE.—A study of the plays and poems, with attention to sources, earlier criticism, and the work of Shakespeare's contemporaries. 3 s.h. (w) [Not offered in 1954-55] PROFESSOR GILBERT

245. THE EIGHTEENTH-CENTURY NOVEL.—Richardson, Fielding, Smollett, and Sterne are emphasized. Some attention is given to earlier prose fiction and to other contributing literary patterns. Lectures and short papers. 3 s.h. (w) PROFESSOR BOYCE

251, 252. ENGLISH LITERATURE IN THE SEVENTEENTH CENTURY.—A survey course. The major works in prose, poetry, and drama from 1600 to the death of Dryden. Lectures, reports, and term papers. 6 s.h. (w) PROFESSOR WARD

269, 270. SOUTHERN LITERATURE.—The principal writers discussed during the first semester are Byrd, Jefferson, Wirt, Kennedy, the Cooke brothers, Legaré, Simms, Timrod, Hayne, Longstreet and other humorists, and the poets of the Civil War. Considerable attention is paid to the historical and cultural background and to Northern and British authors who wrote about the South. An oral report and a term paper are required each semester. 6 s.h. (w) PROFESSOR HUBBELL
[Not offered in 1954-55]

274. AMERICAN HUMOR.—The development of the native tradition in the Down-East humorists and the humorists of the Old Southwest. Extensive reading in Mark Twain and his contemporaries, and some attention to the continuation of the tradition after Mark Twain. 3 s.h. PROFESSOR TURNER
[Not offered in 1954-55]

DEPARTMENTAL MAJOR

Prerequisite: English 1 and 2.

Major Requirements: Twenty-four semester hours in English and American literature including the following:

1. Six hours in English 55-56.
2. Six hours in one of five designated period courses (143-144, 111-112, 125-126, 131-132, 137-138).
3. Three hours in one of the major authors, Chaucer, Shakespeare, or Milton (203-204, 141, 123, 124, 117).
4. Nine hours, distributed as follows:
 - (a) Three hours of English literature before 1800. Students who have chosen 143-144 or 111-112 for the period course may substitute any three-hour course approved by their adviser.
 - (b) Three hours of English literature after 1800. Students who have chosen 125-126 or 131-132 for the period course may substitute any three-hour course approved by their adviser.
 - (c) Three hours of American literature. Students who have chosen 137-138 for the period course may substitute any three-hour course approved by their adviser.

Related work: Eighteen semester hours, which may include appropriate courses in history, aesthetics, art, music, languages, literature in translation, philosophy, or courses in composition, dramatics, and speech. Related work must be taken in at least two departments.

Electives: Students may use 12 hours of their free electives for additional work in English and American literature. The maximum credit in such courses may not exceed 36 hours. A total of 54 semester hours' credit in the department is allowed. Students who are looking forward to graduate work should take as many of the period courses as possible. No more than five seniors may be admitted to any course on the 200 level.

FORESTRY

Students without a Bachelor's degree who are preparing for work in forestry as a profession should take the courses outlined under the Academic-Forestry Combination in the section on Requirements for Degrees. However, with the consent of the instructor in charge, certain forestry courses may be elected by students in other curricula provided they have had adequate preparation (see *Bulletin of the School of Forestry*).

Members of the sophomore, junior, and senior classes, whether or not registered in the Academic-Forestry Combination, may elect the following course:

52. PRINCIPLES OF FORESTRY.—Introduction to forestry in the United States; growth of trees and forests; social and economic problems in developing America's primary renewable natural resource; contribution of forests to the national economy. 2 s.h. (w) ASSISTANT PROFESSOR STOLTENBERG

GEOLOGY

PROFESSOR BERRY, CHAIRMAN AND DIRECTOR OF UNDERGRADUATE STUDIES;
MESSRS. BOWMAN AND HERON

51. GENERAL GEOLOGY.—This course is designed to give a general view of the surface features of the earth, their origin, structure, and materials. Illustrative materials are studied in the laboratory. Excursions are made to neighboring points where the principles of the science are studied in the field. Three one-hour lectures or recitations and one three-hour laboratory. 4 s.h. (E)

MR. HERON AND STAFF

52. GENERAL GEOLOGY.—This course is designed to give some knowledge of the chief events of the earth's history. Excursions will be made to suitable neighboring localities. Three one-hour lectures or recitations and one three-hour laboratory. Prerequisite: Geology 51. 4 s.h. (E)

MR. HERON AND STAFF

55. STRUCTURAL GEOLOGY.—A study of the structural features of the earth's crust. Three one-hour lectures. Prerequisite: Geology 51, 52. 3 s.h. (E)

MR. HERON

58. GEOMORPHOLOGY.—A detailed study of the process at work on the land surface and the topographic forms produced by them under different climatic conditions. This course includes practice in the interpretation of topographic maps. Three one-hour lectures or recitations and one three-hour laboratory. 4 s.h. (E)

PROFESSOR BERRY

101-102. MINERALOGY.—This course is devoted to a study of the fundamentals of crystallography and the crystal groups, using crystal models and crystallized minerals. Followed by the systematic study of about 175 important minerals. Determinative work includes exercises on sight recognition, identification by blow-pipe, and other physical and chemical tests. Excursions will be made to neighboring mineral localities. Three two-hour periods. Prerequisite: Chemistry 1-2 (can be taken concurrently). 8 s.h. (E)

PROFESSOR BERRY

151. ECONOMIC GEOLOGY.—Study of world distribution, geologic occurrence, and uses of important mineral deposits. Three one-hour lectures or recitations and one three-hour laboratory. Prerequisite: Geology 101-102. 4 s.h. (E)

PROFESSOR BERRY

152. INTRODUCTORY PALEONTOLOGY.—Systematic study of invertebrate paleontology, dealing mainly with generic characters of the fossil invertebrates and their use in identifying and correlating geologic formations. Three one-hour lectures or recitations and one three-hour laboratory. Prerequisites: Geology 51, 52, and Zoology 2. 4 s.h. (E)

PROFESSOR BERRY

164. **INTRODUCTION TO GEOLOGIC MAPPING.**—An introduction to the fundamental principles and techniques used in geologic mapping, including applicable methods of surveying, the use of aerial photographs, the interpretation of geologic maps, and the solution of problems in geologic relationships. Field excursions will be made when possible. Two hours of lecture and three hours of laboratory each week. Prerequisites: Geology 51, 52, 55, 151. 3 s.h. (E)

MR. HERON

DEPARTMENTAL MAJOR

Prerequisites: Chemistry 1-2; Zoology 2, Geology 51, 52.

Major Requirements: 1. Number of hours needed, 30 s.h. 2. Required courses, Geology 55, 101-102, 151, 152, 164. 3. Recommended courses, Geology 58.

Related Work: 1. Number of hours needed for A.B., 12 s.h.; for B.S., 18 s.h. 2. Required courses, 1 year Mathematics. 3. Departments in which related work is usually taken, Chemistry, Economics 115-116, Mathematics, Physics, Sociology 111, Zoology, and General Engineering.

GERMANIC LANGUAGES AND LITERATURE

PROFESSOR VOLLMER, CHAIRMAN; ASSOCIATE PROFESSOR MAXWELL, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR WILSON, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSOCIATE PROFESSOR SHEARS; DR. BAUM AND MR. YATES

All courses except Elementary and Intermediate German may be taken for one semester only, when circumstances make it advisable.

1-2. **ELEMENTARY GERMAN.**—6 s.h. (E & W)

ASSOCIATE PROFESSOR MAXWELL AND STAFF

3-4. **INTERMEDIATE GERMAN.**—6 s.h. (E & W)

ASSOCIATE PROFESSOR WILSON AND STAFF

51-52. **INTRODUCTION TO GERMAN LITERATURE.**—A third year course. Both literary and linguistic factors are combined with practice in the spoken language. 6 s.h. (W)

ASSOCIATE PROFESSOR SHEARS AND STAFF

For courses in the 100 and 200 group which will be offered in 1954-1955, please consult list furnished by Dean's office before registration. The only prerequisite for 100 group courses is German 3-4.

107, 108. **SCIENTIFIC GERMAN.**—The German language as used in the various contemporary sciences. 6 s.h. (W)

ASSOCIATE PROFESSORS MAXWELL AND WILSON

109, 110. **GERMAN PROSE FICTION.**—Origin and development of the German novel with special emphasis on the nineteenth century. 6 s.h.

ASSOCIATE PROFESSOR WILSON

115, 116. **GERMAN DRAMA OF THE NINETEENTH CENTURY.**—A study of leading dramatists from Kleist to Hauptmann. 6 s.h.

ASSOCIATE PROFESSOR WILSON

117, 118. **GERMAN CONVERSATION.**—A course in writing and speaking German for properly qualified students. 6 s.h.

PROFESSOR VOLLMER; ASSOCIATE PROFESSORS MAXWELL AND SHEARS

125, 126. **CONTEMPORARY GERMAN LITERATURE.**—A study of representative works of the twentieth century. 6 s.h.

ASSOCIATE PROFESSOR SHEARS

127, 128. **SURVEY OF MODERN GERMAN LITERATURE.**—Excerpts from novels, poems and short stories illustrating the development of modern German literature are read. 6 s.h.

PROFESSOR VOLLMER

131, 132. **INTRODUCTION TO GOETHE.**—The reading of his early novels and epics and works pertaining to his life. 6 s.h.

ASSOCIATE PROFESSOR MAXWELL

203, 204. **EIGHTEENTH CENTURY.**—Eighteenth-century German literature in its relation to contemporary European philosophy. 6 s.h. (W)

PROFESSOR VOLLMER

207, 208. **GERMAN ROMANTICISM.**—The course covers the entire field of German romanticism from 1800 to 1850. 6 s.h. (W)

PROFESSOR VOLLMER

209, 210. KLEIST, GRILLPARZER, AND HEBBEL.—The dramatic development in Germany after Schiller. 6 s.h. (w)

211, 212. HEINRICH HEINE AND HIS TIME.—Heine's life and thought, and the contemporary European culture. 6 s.h. (w) PROFESSOR VOLLMER

213, 214. LITERATURE OF THE EMPIRE, 1871-1914.—A study of the literature of this period with emphasis on a few leading writers. 6 s.h. (w) ASSOCIATE PROFESSOR SHEARS

DEPARTMENTAL MAJOR

1. *Prerequisites*: German 1-2 and 3-4.

2. *Major Requirements*: Twenty-four semester hours in the German Department. Twelve of these must be selected from the 200 courses. The remaining twelve may be selected from German 51-52 and any courses in the 100 group except 119-120.

3. *Related Work*: Eighteen semester hours, chosen from the Humanities with the approval of the German Department.

GOVERNMENT

See courses listed under Political Science.

GREEK

ASSOCIATE PROFESSOR TRUESDALE, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR ROSE, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSOR WAY

Courses 15, 121, 122, 131, 141, 142 are entirely in English and require no knowledge of the Greek language. The purpose in offering them is to give a wider circle of students some conception of the debt which modern civilization owes to the Greeks.

1-2. COURSE FOR BEGINNERS.—Open to all students. 6 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

15. MYTHOLOGY.—A study of Greek mythology and the use made of it in art and English literature. No knowledge of the Greek language is required. Open to freshmen as an elective in either semester. 3 s.h. (w & e)

ASSOCIATE PROFESSOR TRUESDALE AND ASSISTANT PROFESSOR WAY

53-54. XENOPHON.—*Anabasis*, Books I-IV. Open to students who have completed course 1-2. 6 s.h. (w)

ASSOCIATE PROFESSOR ROSE

105-106. HOMER.—*Iliad*, Books I-III. PLATO.—*Apology* and *Crito*. Open to students who have completed courses 1-2 and 53-54 or their equivalents. 6 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

107-108. EURIPIDES.—*Medea*. SOPHOCLES.—*Oedipus Tyrannus*. ARISTOPHANES.—*Clouds*. Open to students who have completed the required preliminary work. 6 s.h. (w)

ASSISTANT PROFESSOR WAY

115-116. SIGHT READING IN GREEK.—Three hours per week through the year. 4 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

117-118. GREEK PROSE COMPOSITION.—The character of this course is determined by the needs of the students enrolled. 3 s.h. (w) ASSOCIATE PROFESSOR ROSE

121, 122. GREEK LITERATURE IN ENGLISH TRANSLATION.—The purpose of this course is to give a general survey of the life and civilization of the Greeks, especially to those who have never studied the language but wish to become acquainted with some of the choicest portions of the literature by the use of translations. It is, however, open as an elective to all juniors and seniors, whether they know Greek or not. First, the *Iliad* and the *Odysey* are read in translation and

illustrated with stereopticon views of the excavations and discoveries at Troy and other cities of the Aegean age; then, many of the extant plays of the three great tragic poets are studied in English translation. 6 s.h. (W & E)

ASSOCIATE PROFESSORS ROSE AND TRUESDALE

Students may elect course 122, whether they have taken course 121 or not.

131. HISTORY OF GREECE.—The history of the Greek world from the Late Bronze Age to the Macedonian conquest. Open to seniors, juniors, and (by arrangement) sophomores. No knowledge of Greek is required. 3 s.h. (E)

ASSISTANT PROFESSOR WAY

141, 142. GREEK ART.—(May be treated as two semester-courses.) Open to seniors, juniors, and sophomores. A comprehensive survey of the development of Greek architecture and Greek sculpture in all periods. Course 141 is opened by a preliminary account of Egyptian, Mesopotamian, and Aegean artistic backgrounds. Course 142 is devoted chiefly to Greek art of the greatest period with the main emphasis on sculpture, and may be elected independently of course 141. All lectures are fully illustrated by slides. No knowledge of Greek is required. 6 s.h. (E)

ASSISTANT PROFESSOR WAY

201-202. GREEK TRAGEDY.—6 s.h. (W)

ASSOCIATE PROFESSOR TRUESDALE

203-204. HOMER.—*Odyssey*. PINDAR AND BACCHYLIDES. 6 s.h. (W)

ASSOCIATE PROFESSOR TRUESDALE

207-208. GREEK ORATORS.—Selected speeches. 6 s.h. (W)

ASSISTANT PROFESSOR WAY

209-210. PLATO.—*Symposium*, *Protagoras*, and parts of the *Republic*. 6 s.h. (W)

ASSISTANT PROFESSOR WAY

Only one of the year-courses for seniors and graduates (201-210), listed above, is offered each year.

243. ATHENIAN TOPOGRAPHY.—The topography and monuments of ancient Athens. 3 s.h. (W)

ASSISTANT PROFESSOR WAY

244. GREEK EPIGRAPHY.—Lectures on the history of the alphabet and the development of the local Greek alphabets, followed by extensive reading of inscriptional texts in facsimile. 3 s.h. (W)

ASSISTANT PROFESSOR WAY

245. GREEK DIALECTS.—A linguistic study of transliterated inscriptions illustrative of the major Greek dialects. The interrelations of the dialectal forms are examined with reference, where possible, to their origin in protoethnic Greek. 3 s.h. (W)

ASSISTANT PROFESSOR WAY

246. GREEK HISTORICAL INSCRIPTIONS.—The more valuable historical inscriptions are read in chronological order and interpreted in their general bearing upon the course of Greek history. 3 s.h. (W)

ASSISTANT PROFESSOR WAY

247-248. GREEK ARCHAEOLOGY.—Advanced course in the general field for seniors and graduates, comprising architecture, sculpture, vases, and the minor arts. 6 s.h. (W)

ASSISTANT PROFESSOR WAY

Of the courses numbered from 243 to 248 only two semester-courses are offered each year.

DEPARTMENTAL MAJOR

Prerequisite: Greek 1-2.

Major Requirements: A candidate for a major in Greek must complete 24 semester hours, including the following courses: Greek 53-54, 105-106, 107-108, 117-118, and 131.

Related Work: Eighteen semester hours selected from at least two other departments subject to the approval of the Greek Department. Appropriate courses are chosen usually in Latin, Philosophy, Art, and English.

Graduates of Duke University may attend the American School of Classical Studies at Athens, Greece, without charge for tuition and are eligible to compete for the fellowships that are offered annually by the School. These consist of two fellowships in Greek archaeology and one in the language, literature, and history of ancient Greece, each with a stipend of \$2,000. They are awarded mainly on the basis of examinations held in the beginning of February of each year.

HEALTH AND PHYSICAL EDUCATION

TRINITY COLLEGE AND THE COLLEGE OF ENGINEERING

MR. CAMERON, DIRECTOR; PROFESSOR AYCOCK, DIRECTOR OF UNDERGRADUATE STUDIES AND SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSORS BLY, FALCONE, HARRISON, MONTFORT, AND PERSONS; MESSRS. BRADLEY, COX, DRAGO, AND SORESENSEN

REQUIRED PHYSICAL EDUCATION FOR MEN

A student must complete four semesters of physical education in order to fulfill graduation requirements.

All students are given a medical and physical examination before registration. Students who have physical handicaps must register in Corrective Physical Education. Students assigned to these classes will take work suited to their particular needs and capacities.

Students without defects will register in Physical Education 1 and 2 in their freshman year. The activities are selected from the following: Apparatus, combative games (fundamentals of basketball, soccer, volleyball), swimming and tumbling. Swimming is required each semester of freshman year.

After a student has completed Physical Education 1 and 2, he may complete his physical education requirement by electing and satisfactorily completing two courses from the following individual and team sports: 51. Apparatus-Tumbling; 52. Badminton; 53. Basketball-Handball; 54. Boxing-Wrestling; 55. Lacrosse-Soccer; 56. Swimming, advanced; 57. Tennis-Volleyball.

For information concerning gymnasium uniforms see page 186.

ELECTIVES IN PHYSICAL EDUCATION

The courses listed below are arranged to meet the increasing demand for teachers who are qualified to coach and teach Physical Education. They are open for credit only to students in the High School Teaching Program. These students may elect 15 semester hours from courses in this group. Six semester hours may be elected from the courses listed under Special Methods in Physical Education and 9 semester hours may be elected from the courses listed under Theory and Practice in Physical Education. The courses should be selected with the advice of the Director of Undergraduate Studies in order to meet the needs of the individual.

SPECIAL METHODS IN PHYSICAL EDUCATION

163. ATHLETIC COACHING IN SECONDARY SCHOOLS.—Theory and practice in the fundamentals of coaching baseball and track. Prerequisites: courses 1 and 2. Open to juniors and seniors. Sophomores by permission only. 3 s.h. (w)
MESSRS. CHAMBERS AND PARKER

164. ATHLETIC COACHING IN SECONDARY SCHOOLS.—Theory and practice in the fundamentals of coaching football and basketball. Prerequisites: courses 1 and 2. Open to juniors and seniors. Sophomores by permission only. 3 s.h. (w)
MR. CAMERON AND STAFF

THEORY AND PRACTICE IN PHYSICAL EDUCATION

65. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.—A study of the objectives and principles upon which physical education is based. The history of physical education is studied in order to show the changes in objectives, principles, and methods and as an aid in the interpretation of trends. Open to sophomores, juniors, and seniors. 3 s.h. (w)
PROFESSOR AYCOCK

172. RECREATIONAL LEADERSHIP.—Combative contests, games, mass athletics, supervision of community recreation. Open to juniors and seniors. Sophomores by permission only. 3 s.h. (w)
ASSISTANT PROFESSOR HARRISON

182. THE ADMINISTRATION OF HEALTH AND PHYSICAL EDUCATION IN SECONDARY SCHOOLS.—Presents the everyday problems that arise in the experience of the teacher of health and physical education. Open to juniors and seniors. 3 s.h. (w)
ASSISTANT PROFESSOR HARRISON

190. PROTECTIVE PRACTICES IN PHYSICAL EDUCATION.—A study of safety measures including training and first aid. Open to juniors and seniors. 3 s.h. (w)
MR. CHAMBERS AND ASSISTANT PROFESSOR MONTFORT

HEALTH EDUCATION

132. SCHOOL HEALTH PROBLEMS.—A course designed (a) to familiarize the teacher with school health problems such as physical screening, communicable disease prevention and control, healthful school environment; (b) to present methods and materials for health teaching in elementary and secondary schools. 3 s.h. (w)
PROFESSOR AYCOCK

WOMAN'S COLLEGE

PROFESSOR GROUT, CHAIRMAN AND DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR EDDY, SUPERVISOR OF FRESHMAN INSTRUCTION IN PHYSICAL EDUCATION; ASSISTANT PROFESSOR UHRHANE, SUPERVISOR OF FRESHMAN INSTRUCTION IN HEALTH EDUCATION; ASSOCIATE PROFESSORS BOOKHOUT AND LEWIS; ASSISTANT PROFESSOR HOLTON; MRS. KEPPEL, MRS. MASSEY, MISS RIEBEL, MRS. STOCKTON AND MISS WILLIAMS

Every student must take one semester ($\frac{1}{2}$ s.h.) of each of the following types of activity: individual or dual sport, dance, and swimming (if she is unable to pass the swimming test). The remaining work necessary to complete the requirement may be elected from the activities listed in this section. All required work should be completed by the end of the junior year.

All students are given a physical and medical examination upon entering and at intervals throughout their college course. Classes in individual physical education and light sports are arranged for those who should not take the more active work.

For information concerning gymnasium costumes see page 189.

SPECIAL FRESHMAN PHYSICAL EDUCATION

At the beginning of the freshman year, after a series of tests has been given, individual conferences are held and each student is guided into the type of activity she most needs, as determined from the evaluation of the test scores and the results of the conference. This course continues for half the semester after which all freshmen take body mechanics and social hygiene for the remainder of the semester.

In the Woman's College the three-year requirement is met as follows:

FRESHMAN YEAR

FRESHMAN ACTIVITIES.—First semester. $\frac{1}{2}$ s.h. Second semester 1 s.h.

PHYSICAL EDUCATION 1, BODY MECHANICS AND SOCIAL HYGIENE.—First semester. $\frac{1}{2}$ s.h.

SOPHOMORE YEAR

PHYSICAL EDUCATION ACTIVITIES.—1 s.h.

JUNIOR YEAR

PHYSICAL EDUCATION ACTIVITIES.—1 s.h.

PHYSICAL EDUCATION ACTIVITIES

Individual and dual sports: Archery, badminton, bowling, diving, fencing, golf, life saving, light sports, riding, swimming, tennis, first aid, instructors' life saving and water safety.

Team sports: Basketball, hockey, softball, volleyball.

Rhythmic Activities: Ballroom dance, folk dance, fundamental movement, fundamental rhythms, modern dance, square dance, tap dance.

Developmental Activities: Body mechanics, individual physical education, motor skills, posture.

PHYSICAL EDUCATION THEORY

Students preparing to teach physical education and health on a full-time or part-time basis may receive academic credit for all courses listed below. Course 107 is also open to students preparing for social group work and religious education.

Students in the Elementary School Teaching Program must take Physical Education 102 and Health Education 112.

All students may receive credit for Physical Education 105-106, 114, and Health Education 41 and 62.

91. FIRST AID AND SAFETY IN PHYSICAL EDUCATION.—A study of measures which must be taken in the organization and teaching of physical education to insure maximum safety. The Standard Red Cross First Aid Course will be included. 2 s.h. (E) ASSOCIATE PROFESSOR BOOKHOUT

101. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.—An historical survey of physical education stressing the relationship between the types of activity developed and the social and political ideals of different nations and periods. A study of the principles upon which physical education is based. Analysis of successful teaching in physical education. 2 s.h. (E) PROFESSOR GROUT

102. THE TEACHING OF PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS.—A study of methods and materials used in teaching physical education to children; includes discussion on the theory of physical education, and practice in teaching elementary school activities. Required of students in the elementary school teaching program. 3 s.h. (E) ASSOCIATE PROFESSOR LEWIS

103. GAMES AND RHYTHMS FOR CHILDREN.—Required of students preparing for full-time teaching of physical education. 2 s.h. (E)
[Offered every other year alternating with P.E. 107.] ASSOCIATE PROFESSOR LEWIS

105-106. METHODS AND MATERIALS IN RECREATION.—A course intended to familiarize students with recreation activities and methods of organizing groups in these activities. Laboratory work includes practical leadership experience with a recreational club or group in a city organization. General fields covered are: Social Activities, Music Activities, Folk and Square Dancing, Games and Sports, Arts and Crafts, Drama Activities. Open to juniors and seniors without prerequisite. A year course meeting five periods per week throughout the year. Students who have had 102 or 103 may take 106 without 105. 6 s.h. (E)

ASSISTANT PROFESSOR HOLTON

107. THE TEACHING OF RHYTHMIC ACTIVITIES.—Basic theory and practice in the methods of teaching various types of dance activities. 2 s.h. (E)
[Offered every other year alternating with P.E. 103.] MRS. STOCKTON

113. MAMMALIAN ANATOMY.—A study of all organ systems with special emphasis on osteology, arthrology and myology. The cat serves as laboratory animal, but constant application is made to man. Prerequisite: Zoology 1 and 2. 4 s.h. (E)
ASSOCIATE PROFESSOR BOOKHOUT

114. KINESIOLOGY.—A study of muscle function. Analysis of fundamental movements with emphasis on the development of normal posture and efficient body movement. Required of students taking the major in physical education. Prerequisites: Zoology 1 and 2, and P.E. 113 or Zoology 53. 3 s.h. (E) (Not open to students who have had P.E. 116.) ASSOCIATE PROFESSOR BOOKHOUT

116. KINESIOLOGY.—A study of muscle function. Analysis of human motion as a basis for therapeutic exercise. Prerequisite: Human Anatomy. 3 s.h. (w) (Not open to students who have had P.E. 114.) ASSOCIATE PROFESSOR BOOKHOUT

117. BODY MECHANICS AND INDIVIDUAL PHYSICAL EDUCATION.—A study of the fundamentals of body movement and teaching methods for courses in body mechanics. An analysis of faulty postures for which individual physical education procedures are indicated. 3 s.h. (E) ASSOCIATE PROFESSOR BOOKHOUT

119. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION.—Curriculum building in physical education. A study of facilities including plans and equipment for gymnasias and playgrounds. Administrative problems of the high-school teacher and public school supervisor. 2 s.h. (E) PROFESSOR GROUT

120. EVALUATION AND MEASUREMENT IN PHYSICAL EDUCATION.—History of evaluation and measurement in physical education. Elementary statistics and application of statistical procedure in testing. Familiarity with athletic achievement tests for elementary and secondary schools, and with testing of sport techniques, rhythm, and general qualities of motor ability, motor capacity, and motor educability. 2 s.h. (E)

181-182. METHODS AND MATERIALS IN PHYSICAL EDUCATION.—A course in the theory and practice of teaching and officiating in games and sports. Laboratory hours arranged to provide practice on the field and in the gymnasium. 6 s.h. (E) ASSOCIATE PROFESSOR LEWIS AND STAFF

185. ADVANCED METHODS AND MATERIALS IN PHYSICAL EDUCATION.—A continuation of 181-182. Required of seniors preparing for full-time teaching in physical education. 2 s.h. (E) ASSOCIATE PROFESSOR LEWIS AND STAFF

HEALTH EDUCATION

41. PERSONAL HEALTH.—A presentation of basic health information appropriate to the college age group. Emphasis is placed on the individual's responsibilities and potential contributions toward personal and family health. Either semester. 3 s.h. (E) ASSISTANT PROFESSOR UHRHANE

62. COMMUNITY HEALTH PROBLEMS.—This course includes problems of health in community living such as environmental health hazards and their control, health problems specific to certain groups, and the place and contribution of official and non-official public health agencies. Emphasis is placed on the responsibility of each community member to recognize problems and to work together toward the goal of a mentally, physically and socially healthful community. 3 s.h. (E) ASSISTANT PROFESSOR UHRHANE

111-112. SCHOOL HEALTH.—This course is designed to meet the needs of the classroom teacher. It deals with the organization and administration of the school health program; with modern principles of education as applied to health education; with basic health problems confronting the schools; and with methods and materials for teaching health education. Primarily designed for students preparing to teach in elementary schools and for physical education majors. 6 s.h. (E) ASSISTANT PROFESSOR UHRHANE

NOTE: 111 does not carry credit without 112. 112 may be taken without 111.

REQUIREMENTS FOR TEACHING HEALTH AND PHYSICAL EDUCATION IN PUBLIC SCHOOLS

The following requirements have been set up for students in the Teaching Program who wish to qualify as full-time or part-time teachers of Health and Physical Education. These requirements meet the standards of the North Carolina Department of Public Instruction for certification in Health and Physical Education and of most of the other states represented in the student body. Students preparing to teach in any state are advised to consult the department about specific requirements.

Prerequisites: Physical Education 91 and 101; Health Education 111 or 41; Zoology 1-2.

Major Requirements: 23 s.h. including Physical Education 103, 107, 114, 117, 119, 181-182, 185, and Health Education 112.

Recommended Course: Physical Education 120.

Related Work: 17 to 19 s.h. Of these hours 8 must be in anatomy and physiology (P.E. 113, Mammalian Anatomy and Zoology 151, Principles of Physiology). Of the remaining hours work done in Department of Education leading to teacher certification is acceptable. Courses in Chemistry, Zoology, Sociology, Psychology, Art and Music are recommended.

HISTORY

PROFESSOR SYDNOR, CHAIRMAN; PROFESSOR HAMILTON, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR FERGUSON, SUPERVISOR OF FRESHMAN INSTRUCTION;
 PROFESSORS CARROLL, CLYDE, CURTISS, LANNING, MANCHESTER, AND WOODY;
 ASSOCIATE PROFESSORS NELSON, PARKER, ROPP, AND WATSON; ASSISTANT
 PROFESSORS ACOMB, COLTON, DECONDE, HOLLEY, AND STEVENS;
 DR. DURDEN, MESSRS. OLIVER AND DOWNS

The undergraduate courses in history are designed to afford (1) an introduction to the study of history by a consideration of the history of the modern world; (2) a more intensive study of general American history; (3) opportunities for more advanced study of phases of American, English, European, Hispanic-American, Russian, and Eastern history which interest the teachers and students.

Course 1-2 or 51-52 or E1-2 or an equivalent is a prerequisite for all other courses; course E1-2 is the prescribed course for students in the College of Engineering; courses 91 and 92 are prerequisite for all 100 and 200 courses in United States history. However, seniors with written permission from the instructor may take advanced American history courses without having had 91 and 92. Sophomores who took only one semester of course 1-2 in the freshman year may be admitted to courses 91 and 92, 63, or 67-68, provided they made a grade of B or above on the semester taken. Courses offered for seniors and graduates are limited to twenty-five students; juniors may not elect them without special permission from the Department and the Executive Committee of the Graduate Faculty. Sophomores must obtain permission of the instructor in order to be admitted to courses numbered above 100; students who are not fully qualified sophomores will not be admitted to these courses.

1, 2. HISTORICAL BACKGROUND OF THE WORLD TODAY.—This course is an introduction to the study of modern history with special reference to the issues in the modern world. Topics selected for emphasis are: the contest between liberty and authority in the modern state; changing economic organization and theory—capitalism and the challenges to it; the problems of peace and war among the states; the changing faiths men live and die by. Beginning about 1500 with the rise of the European dynastic states, the story is pursued in the first semester to approximately 1871, and in the second through the two great world wars. The central theme in both semesters is the expansion of the influence of Western Europe throughout the world, with some attention to the rise of the United States as a world power. 6 s.h. (w & e)

Sophomores and juniors are not admitted to this course. One semester of the course may be counted as a general elective but not as fulfilling the minimum uniform requirements or, except as provided above, as a basis of further work in history.

PROFESSOR HAMILTON; ASSOCIATE PROFESSORS FERGUSON, PARKER, AND ROPP;
 ASSISTANT PROFESSORS ACOMB, COLTON, AND DECONDE;
 DR. DURDEN, MR. DOWNS, AND MR. OLIVER

E1-2. THE UNITED STATES IN THE WORLD TODAY.—This course is designed for students in the College of Engineering. Topics treated in the first semester are: the rise of national states in Western Europe and other factors attending the discovery and settlement of the New World; the foundation of American institutions; the establishment of the Federal Republic; the frontier, the westward movement, and contemporary international development; the Civil War; the growth of industry and its influence on society; the Spanish-American War and the emergence of the United States as a world power. In the second semester the emphasis is on the growing interdependence of the Western nations in the twentieth century; their influence throughout the world; the participation of the United States in the World Wars and the resultant problems of today. 6 s.h. (w)

ASSISTANT PROFESSOR HOLLEY; DR. DURDEN

51, 52. HISTORICAL BACKGROUND OF THE WORLD TODAY.—An introductory course for sophomores, juniors, and seniors dealing with the topics indicated in the description of course 1-2. 6 s.h. (w & e)

PROFESSOR CURTISS; ASSOCIATE PROFESSOR ROPP; ASSISTANT
 PROFESSORS ACOMB AND COLTON; DR. DURDEN;
 MR. DOWNS AND MR. OLIVER

[Not open to freshmen or to students who have had course 1-2.]

63. NAVAL HISTORY AND ELEMENTARY STRATEGY.—After a review of earlier periods, attention is given to the rise of sea-power and its importance in more recent times and to naval actions, especially in the two World Wars. This course is not open to students who have had N.S.101. 3 s.h. (w)

ASSOCIATE PROFESSOR ROPP

67-68. THE BACKGROUND OF MODERN EUROPEAN CIVILIZATION.—The course deals primarily with the intellectual-cultural history of the peoples of Europe and adjacent areas from the period of the earliest written records to the formation of the European states-system (c. 1648). The work aims to develop critical appreciation and maturity of judgment in historical interpretation through the use of original sources. 6 s.h.

ASSOCIATE PROFESSOR NELSON

91. THE DEVELOPMENT OF AMERICAN DEMOCRACY TO 1865.—This course is a study of trends vital to an understanding of the United States today. The main theme is the development of American democracy. Problems of foreign policy, the growth of capitalism, political practices, social behavior, and conflicting ideals are considered in relation to this main theme. 3 s.h. (w & e)

ASSOCIATE PROFESSOR WATSON; ASSISTANT PROFESSORS
DeCONDE, HOLLEY, AND STEVENS

92. THE DEVELOPMENT OF AMERICAN DEMOCRACY, 1865 TO THE PRESENT.—A continuation of History 91 with emphasis upon the emergence of contemporary problems. 3 s.h. (w & e)

ASSOCIATE PROFESSOR WATSON; ASSISTANT PROFESSORS
DeCONDE, HOLLEY, AND STEVENS

Courses 91 and 92 are intended both to serve as continuation courses in the study of history and to afford the student an opportunity to gain the understanding of the past of the United States essential for intelligent citizenship. These courses are prerequisite for all 100 and 200 courses in United States history, but this prerequisite may be waived for seniors by written permission of the instructor.

105-106. POLITICAL AND CONSTITUTIONAL HISTORY OF ENGLAND.—The origins and evolution of the principal institutions of the English government, related to their setting in a changing society. 6 s.h. (w)

PROFESSOR HAMILTON

107-108. SOCIAL AND CULTURAL HISTORY OF ENGLAND.—A study of English history from the fourteenth century to the present time in an effort to arrive at a synthesis of social and political events and thus provide a background for the study of English literature. Emphasis is placed on the ages of Chaucer, Shakespeare, and Milton; the eighteenth and early nineteenth centuries; the reign of Victoria and the twentieth century. 6 s.h. (e)

ASSOCIATE PROFESSOR FERGUSON

Sophomores who made an average grade of B or above on course 1-2 may be admitted to this course.

113-114. AMERICA IN THE TWENTIETH CENTURY.—A historical survey of political, economic, and social problems of twentieth-century United States. Emphasis is placed on reform movements from the Muckrakers through the New Deal, the emergence of the United States as a world power, and conflicting ideas and ideologies. 6 s.h. (w)

ASSOCIATE PROFESSOR WATSON

115-116. THE AGE OF ABSOLUTE MONARCHY AND THE FRENCH REVOLUTION.—The study in the first semester deals primarily with the political and social institutions of Western Europe in the seventeenth and eighteenth centuries, including such topics as the absolute monarchy in theory and practice, the peasants, the nobles, commercial and industrial classes, the Church. The study in the second semester includes the old regime in France, the French Revolution, and Napoleonic institutions in Western Europe. 6 s.h. (e)

ASSISTANT PROFESSOR ACOMB

119-120. THE HISTORY OF THE LABOR MOVEMENT IN EUROPE.—The origins, growth, and organization of the industrial working classes of Europe from early modern times to the present. This course deals with the history of the organized labor movement in England, France, Germany, Italy, and the Scandinavian countries in relation to political and economic developments in those countries. Emphasis is placed on the rise of trade unions, the emergence of working class political parties, the influence of revolutionary and reformist theories, and the role of international labor organizations. 6 s.h. (w)

ASSISTANT PROFESSOR COLTON

121-122. THE FOREIGN RELATIONS OF THE UNITED STATES.—This course is designed to acquaint the student with the historical development of ideas and movements that have shaped American attitudes toward the outside world and to provide an historical introduction to the formal conduct of diplomacy. 6 s.h. (w)

ASSISTANT PROFESSOR DeCONDE

127. HISTORY OF LATIN AMERICA THROUGH THE FORMATION OF THE NATIONAL GOVERNMENTS.—3 s.h. (w) PROFESSOR LANNING

128. INTER-AMERICAN AFFAIRS.—This course treats the relations of the Latin-American states with each other and with the United States with the design of explaining the current significance of Latin America. Chief emphasis is placed upon social problems and movements common to all the republics and upon the role of the United States in Latin-American affairs, including such topics as American intervention; contributions of the United States to Latin-American life in such matters as public health; Pan-Americanism; Pan-Hispanism; foreign penetration and ideologies; the cultural and commercial aspects of the Good Neighbor Policy; Latin-American states in the World War. 3 s.h. (w) PROFESSOR LANNING

135-136. EUROPE IN THE TWENTIETH CENTURY.—The work in the first semester deals with the period before 1920, including such topics as international relations at the beginning of the twentieth century, the rise of German naval power, the Triple Alliance and the Triple Entente, the economic interdependence of the world, the Turkish Revolution, the Turco-Italian War and the Balkan wars, the first World War, and its immediate aftermath. In the second semester such topics are treated as the rise of totalitarian states, the disruption of world trade, and the second World War. 6 s.h. (w) PROFESSOR CARROLL

141-142. THE FAR EAST FROM COMMODORE PERRY TO CHIANG KAI-SHEK.—Historical interpretations of the role of Eastern Asia in the recent World War with attention to such topics as Western imperialism in China and Japan in the nineteenth century; the rise of Japan as a military and industrial power; the emergence of militant Chinese nationalism; the fusion of the Far Eastern and the European wars into a world conflict; the rise of Chinese communism. 6 s.h. (w)

[Not offered in 1954-55]

PROFESSOR CLYDE

153-154. THE HISTORY OF THE SOUTH.—A study, beginning in the Colonial period, of the development of the Southern part of the United States with particular attention to its distinctive characteristics and institutions and to their influence in shaping Southern attitudes toward major questions of national policy. 6 s.h. (w)

PROFESSOR WOODY

161-162. RUSSIA FROM IVAN THE TERRIBLE TO PRESENT TIMES.—Topics treated include the rise of the Russian state and its relations with Poland and Turkey; the agrarian problem and the rise of industry; the Russian Revolution; the political, agricultural, and industrial policies of the Soviet Union; the role of the U.S.S.R. in World War II; and its postwar policies. 6 s.h. (w) PROFESSOR CURTISS

[Not offered in 1954-55]

UNDERGRADUATE SEMINAR

HISTORY 201-202. SENIOR SEMINAR IN HISTORY.—A course designed to introduce qualified students to advanced methods of historical research and writing and to the appraisal of critical historical issues. Prerequisites: History 1-2 (or 51-52), 91-92, and the consent of the instructor. Open only to seniors. This course, when taken by a history major, would be in addition to the 6 semester hours required in 200-level courses of the History Department. 6 s.h. (w)

ASSOCIATE PROFESSOR PARKER

FOR SENIORS AND GRADUATES

203-204. THE UNITED STATES, 1850-1900.—The rise of sectionalism, secession, war-time problems of the Union and Confederacy, political and economic adjustments of Reconstruction, the status of the Negro, the New South, problems of capital and labor, the agrarian revolt, political parties and reform, the Spanish-American War. 6 s.h. (w)

PROFESSOR WOODY

205-206. THE UNITED STATES IN THE TWENTIETH CENTURY.—The emergence of the United States as a major power; attention is focused on domestic developments and conflicting theories of expansion of federal power. Emphasis in the first semester is on the Progressive era and the first World War; the second semester is devoted to the twenties and to the Franklin Roosevelt administration. 6 s.h. (w)

ASSOCIATE PROFESSOR WATSON

Not open to students who have had 113-114.

209-210. CONSTITUTIONAL HISTORY OF THE UNITED STATES, 1760 TO THE PRESENT.—A study of the basic problems in forming the Constitution; of its development through the major crises in the history of the United States; of the effects of changing social, cultural, economic, and political conditions on the Constitution. 6 s.h. (w)

ASSISTANT PROFESSOR STEVENS

215-216. THE FOREIGN POLICY AND DIPLOMACY OF THE UNITED STATES.—The work in the first semester, covering the period 1775-1877, deals with such topics as the origin and development of basic foreign policies; isolation from Europe; paramount interests in Latin America, including the Monroe Doctrine; international co-operation in the Far East. The work in the second semester, covering the period since 1877, deals with topics such as the rise of the new "manifest destiny"; beginnings of American imperialism in Latin America and the Far East; the failure of traditional neutrality in the first World War; postwar conflicts between isolation and collective security; involvement in the second World War. 6 s.h. (w)

PROFESSOR CLYDE

[Not offered in 1954-55]

217-218. EUROPE SINCE 1870.—International relations since the Franco-German War is the chief subject of study in this course; special emphasis is placed upon the underlying economic and political influences. 6 s.h. (w)

PROFESSOR CARROLL

221-222. THE AGE OF THE RENAISSANCE.—The decline of characteristic features of medieval civilization and the rise of modern European institutions with particular attention to intellectual movements from Dante to Erasmus. 6 s.h. (E)

ASSOCIATE PROFESSOR NELSON

[Not offered in 1954-55]

225-226. THE AGE OF THE REFORMATION.—A survey of European civilization from 1500 through the Peace of Westphalia. 6 s.h. (E)

ASSOCIATE PROFESSOR NELSON

227-228. EUROPE IN THE NINETEENTH CENTURY.—A study, beginning with the career of Napoleon Bonaparte, of the forces and personalities influential in the nineteenth century. Emphasis in the first semester is on the problems of the biographer; in the second, on those of a student of national communities. 6 s.h.

ASSOCIATE PROFESSOR PARKER

230. THE PORTUGUESE EMPIRE AND THE RISE OF BRAZIL.—The course deals with Portuguese explorations, the establishment of the Portuguese Empire in the East, the transplanting of Portuguese culture overseas, and the rise of a native Brazilian civilization. 3 s.h. (w)

PROFESSOR MANCHESTER

231-232. THE HISPANIC COLONIES AND REPUBLICS IN AMERICA.—The development of the Iberian states as colonizing powers, the conquest of America, the Spanish treatment of the Indian, the contest between Spain and other European nations over America, the independence movement, the struggle for stable government, the rise of liberalism with special emphasis upon Mexico from the Revolution of 1910 to the present, and basic inter-American developments. 6 s.h. (w)

PROFESSOR LANNING

233-234. THE INSTITUTIONAL, CULTURAL, AND SOCIAL HISTORY OF HISPANIC AMERICA.—The first semester of this course deals with subject races, the development of mixed breeds, the governmental system, the Church and the Inquisition, and Spanish culture with emphasis upon university subjects. In the second semester the work deals with the political ideas of the wars of independence, revolution and dictatorship, the rise of public education, public health, land reform, and proletarian movements. 6 s.h. (w)

PROFESSOR LANNING

[Not offered in 1954-55]

241-242. THE FAR EAST.—The history of the Western impact on Eastern Asia in the nineteenth and twentieth centuries. Emphasis is placed on such matters as commercial and colonial expansion, the opening of China and Japan, the development by the Western Powers and Japan of colonial, imperialistic, and nationalistic interests, and the rise of Communist power in Asia. 6 s.h. (w) PROFESSOR CLYDE

243-244. THE UNITED STATES AND THE FAR EAST.—An historical analysis of American relations with the peoples of Eastern Asia during the nineteenth and twentieth centuries. 6 s.h. (w) PROFESSOR CLYDE

[Not offered in 1954-55]

245-246. WAR IN THE MODERN WORLD.—This course is concerned with the relations between warfare and modern political, economic, and social conditions. Special attention is given to the development of British and American military methods and to the events of the American Civil War and the two World Wars. The work in the first semester deals with Clausewitz's theories of warfare and the period from the introduction of gunpower to 1871; in the second semester there is a more detailed analysis of recent land, sea, and air warfare. 6 s.h. (w)

ASSOCIATE PROFESSOR ROPP

261-262. RUSSIA IN THE TWENTIETH CENTURY.—A study of the background of the Revolution of 1917 followed by an analysis of the history and policies of the Soviet state. 6 s.h. (w) PROFESSOR CURTISS

[Not offered in 1954-55]

263-264. AMERICAN COLONIAL HISTORY AND THE REVOLUTION, 1606-1783.—The growth of institutions and economic life in the English colonies and the American Revolution. 6 s.h. (w) PROFESSOR WOODY

267-268. THE TRANSITION FROM MEDIEVAL TO MODERN ENGLAND.—A study of the changes in English society and ideas from the time of Edward III to that of Elizabeth. 6 s.h. (E) ASSOCIATE PROFESSOR FERGUSON

Not open to students who have had 107-108.

269-270. ENGLISH HISTORY FROM THE TUDOR PERIOD TOWARD THE PRESENT.—Emphasis is on political and governmental leaders, events, and institutions in selected periods and on the underlying forces that shaped them. 6 s.h. (w)

Not open to students who have had 105-106.

PROFESSOR HAMILTON

DEPARTMENTAL MAJOR

Prerequisites: The Introductory Course in History (1-2 or 51-52).

Major Requirements: Students desiring to take a major in history are required to elect 24 semester hours in the Department, including six semester hours in the senior year from courses in the 200 group. Students desiring to take the more advanced courses in American history should elect courses 91 and 92 in the sophomore or junior year.

COURSES APPROVED FOR RELATED WORK IN HISTORY

The number of courses refer to the description in the 1953-54 catalogue.

Aesthetics

History of Art

History of Music

Economics, but *not* the courses listed under business administration except those in economic geography

Education, 84, 105, 206, 214, 225, 253, 264

English and American Literature, but *not* composition, speech, and drama

German, Greek, Latin, Russian, and the Romance Languages: the literature courses numbered 100 or above that are not primarily conversation or composition courses

Greek 131

Latin 131-132

Philosophy, except 48

Political Science

Psychology, 206 only

Religion courses approved to satisfy the requirement in religion for graduation

Sociology courses in group I, II, 243, 246; Group IV, V.

LATIN AND ROMAN STUDIES

PROFESSOR ROGERS, CHAIRMAN AND DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR ROSE, SUPERVISOR OF FRESHMAN INSTRUCTION; MR. DELHOMME

Students who wish by study in English to make acquaintance with Roman antiquity from either a literary or an historical approach are afforded that opportunity through the courses in translated Latin Literature (111, 112), and Roman History (131, 132).

1-2. COURSE FOR BEGINNERS.—Forms, vocabulary, pronunciation and syntax are emphasized the first semester. They are followed by the reading and translating of Caesar's *Gallie War* the second semester. An effort is made to promote rapid development of ability to read easy Latin with satisfaction. 6 s.h. (w)

MR. DELHOMME

3. CICERO'S ORATIONS.—Four orations including the *Manilian Law* and *Archias* are read, and attention is paid to prose style. Prerequisite: two entrance units of Latin. 3 s.h. (E)

MR. DELHOMME

4. VERGIL'S *AENEID*.—Selections from Books I-VI, to the amount of four books or more, will be read and translated, due attention being paid to prosody. 3 s.h. (E)

MR. DELHOMME

51. LATIN PROSE.—Selections from prose authors or Cicero's *De Senectute* and *De Amicitia*, or selected books of Livy's history, with special emphasis on developing competence in reading Latin. 3 s.h. (E)

THE STAFF

52. LATIN POETRY.—Selections from the greatest Latin poets, especially Horace's *Odes*. 3 s.h. (E)

THE STAFF

57. SIGHT READING IN CLASSICAL LATIN.—One period of an hour per week devoted to practice in the reading of Latin of the classical period; designed to train students to read with facility. 1 s.h. (E)

ASSOCIATE PROFESSOR ROSE

58. SIGHT READING IN MEDIAEVAL LATIN.—One period of an hour per week devoted to reading interesting mediaeval prose and poetry. Prerequisites: at least one of the following courses: Latin 3, 4, 51, 52, and 57, or an equivalent. 1 s.h. (E)

ASSOCIATE PROFESSOR ROSE

65-66. LATIN PROSE COMPOSITION.—Recommended to students who are pursuing course 3-4, 57, and 51-52, and may at the discretion of the instructor be required of such students. 4 s.h. (E)

ASSOCIATE PROFESSOR ROSE

101. TACITUS.—Interesting and historically important selections from the *Annals* or the *Histories* of Tacitus are read, with attention to the literary style and the value of the historical narrative. 3 s.h. (E)

PROFESSOR ROGERS

102. JUVENAL.—Juvenal's literary satire forms the basis of the course. 3 s.h. (E)

PROFESSOR ROGERS

103. CICERO.—Selections from one of the major philosophical works, with attention to Cicero's philosophical thought and literary style. 3 s.h. (E)

PROFESSOR ROGERS OR ASSOCIATE PROFESSOR ROSE

104. LUCRETIUS.—A study of Lucretius as a philosophical thinker and as a poetic artist. 3 s.h. (E)

PROFESSOR ROGERS OR ASSOCIATE PROFESSOR ROSE

111, 112. ROMAN LITERATURE IN ENGLISH TRANSLATION.—Selective readings in Latin Literature in English translation with emphasis on the drama, lyric poetry, and the varied contributions of Cicero to literature in the first term, and upon the epic, the satire, and the novel in the second semester. (No language credit.) 6 s.h. (E)

ASSOCIATE PROFESSOR ROSE

131, 132. HISTORY OF ROME.—A survey of the history of the Roman State from its beginnings to the death of Justinian; its expansion; development of its constitution and public administration; social, legal, political and economic problems of perennial life and interest; the background and setting of Christianity's rise and growth. (This course carries no language credit. No knowledge of Latin is required for admission.) 6 s.h. (E)

PROFESSOR ROGERS

211-212. ROMAN ORATORY.—A reading course in the history and development of Roman oratory, based for the most part on Cicero's *Brutus* and the *Dialogus* of Tacitus. 6 s.h. (F) PROFESSOR ROGERS

DEPARTMENTAL MAJOR

Prerequisite: Latin 1-2, 3-4, or equivalent.

Major Requirements: 24 semester hours which must include courses 51-52, 101-102, 103-104, and 6 semester hours in courses at the 200-level.

Recommended Courses: Latin 65-66, Composition, and 131-132, Roman History.

Related Work: Eighteen hours of related work, elected usually in Greek, Philosophy, Art, Romance Languages, and English. Majors who contemplate graduate work are reminded of the necessity of Greek, German, and French for such study.

MATHEMATICS

PROFESSOR GERGEN, CHAIRMAN; PROFESSOR DRESSEL, DIRECTOR OF UNDERGRADUATE STUDIES;

ASSISTANT PROFESSOR HICKSON, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS

CARLITZ, ELLIOTT, ROBERTS, AND THOMAS; ASSISTANT PROFESSOR PATTERSON;

DRS. FORD, GORDON, PETTY, SHOENFIELD; MRS. MERZBACHER, MESSRS.

OLSON, SMYTHE, WYLIE; AND ASSISTANTS

The following program of courses in Mathematics is planned for 1954-55. Fall: 1, 5, 6, 50, 51, 52, 53, 131, 139, 158, 235, 247, 271, 285, 291. Spring: 1, 5, 6, 16, 50, 51, 52, 53, 125, 131, 140, 175, 236, 248, 272, 286, 292.

1. INTERMEDIATE ALGEBRA.—Elementary topics, factoring, fractions, linear equations in one, two, and three unknowns, functions and graphs, exponents and radicals, elements of quadratic equations. Prerequisite: one unit in algebra and one unit in geometry. 3 s.h. (W & F) STAFF

5. COLLEGE ALGEBRA.—Advanced topics in quadratic equations, systems involving quadratics, variation, binomial theorem, progressions, inequalities, theory of equations, determinants, partial fractions, probability. This course and Mathematics 6 may be taken concurrently. Prerequisite: Mathematics 1, or one and one-half units in algebra and one unit in geometry. 3 s.h. (W & F) STAFF

6. PLANE TRIGONOMETRY.—Logarithms, right and oblique triangles, radian measure, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities and equations. Prerequisite: must be preceded or accompanied by Mathematics 5. 3 s.h. (W & F) STAFF

16. MATHEMATICS OF INVESTMENT.—Simple and compound interest, annuities certain, amortization, sinking funds, depreciation, evaluation of bonds, life insurance. Prerequisite: Mathematics 5. 3 s.h. (W) STAFF

50. PLANE ANALYTIC GEOMETRY.—Rectangular and polar coordinates, loci, straight lines, conic sections. This course and Mathematics 51 may be taken concurrently. Prerequisite: Mathematics 5 and 6. 3 s.h. (W) STAFF

51. CALCULUS I.—Differentiation of elementary functions, curve tracing, maxima and minima, motion, curvature, indeterminate forms. Prerequisite: must be preceded or accompanied by Mathematics 50. 3 s.h. (W) STAFF

52. CALCULUS II.—Integration of elementary functions, areas, solids of revolution, length of arc, surfaces of revolution, centroids, moments of inertia, pressure. Prerequisite: Mathematics 51. 3 s.h. (W) STAFF

53. CALCULUS III.—Introduction to solid analytic geometry, partial differentiation, multiple integrals, series, introduction to differential equations. Prerequisite: Mathematics 52. 3 s.h. (W) STAFF

123. HIGHER ALGEBRA.—The number system, mathematical induction, inequalities, series, recurring series, continued fractions, recurring continued fractions, summation of series, probability. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h. (W) ASSISTANT PROFESSOR HICKSON

124. STATISTICS.—Averages, moments, dispersion, skewness, kurtosis, correlation, types of distributions, curve fitting, graduation of data to type curves, sampling theory. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h. (w)

ASSISTANT PROFESSOR HICKSON

125. ELEMENTARY THEORY OF EQUATIONS.—Permutations, determinants, matrices, linear systems, polynomials and their roots, constructibility, resultants, discriminants, simultaneous equations. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h. (w)

STAFF

131. ELEMENTARY DIFFERENTIAL EQUATIONS.—Solution of differential equations of elementary types; formation and integration of equations arising in applications. Prerequisite: Mathematics 52. 3 s.h. (w)

STAFF

139-140. ADVANCED CALCULUS.—Multiple integrals, series, Taylor's theorem, partial differentiation, improper integrals, line integrals, Green's theorem, complex numbers. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR ELLIOTT

158. FINITE DIFFERENCES.—Operators, interpolation formulas for equal and unequal intervals, inverse interpolation, summation, differential and difference operators, approximate integration. Offered in alternate years. Prerequisite: Mathematics 52. 3 s.h. (w)

ASSISTANT PROFESSOR HICKSON

160. ELEMENTARY SOLID ANALYTIC GEOMETRY.—Planes, straight lines, quadric surfaces. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h.

STAFF

175. PROBABILITY.—Permutations and combinations, total and compound probability, Bayes' theorem, Bernoulli's theorem, mathematical expectation, applications. Offered in alternate years. Prerequisite: Mathematics 52. 3 s.h. (w)

ASSISTANT PROFESSOR HICKSON

FOR SENIORS AND GRADUATES

227-228. THEORY OF NUMBERS.—Congruences, arithmetic functions, compound moduli, quadratic reciprocity, Gauss sums, quadratic forms, sums of squares. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR CARLITZ

229-230. ALGEBRAIC NUMBERS.—Ideals, unique factorization, divisors of the discriminant, determination of the class number. Prerequisite: Mathematics 125. 6 s.h. (w)

PROFESSOR CARLITZ

235-236. ABSTRACT ALGEBRA.—Groups, fields, rings, matrices, quadratic and bilinear forms, general Galois theory, hypercomplex systems. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR CARLITZ

247-248. ARITHMETIC OF POLYNOMIALS.—Field theory, detailed study of finite fields, special polynomials and functions, valuation theory, the zeta function. Prerequisite: Mathematics 235, or consent of the instructor. 6 s.h. (w)

PROFESSOR CARLITZ

253-254. DIFFERENTIAL GEOMETRY.—Curves and surfaces in three dimensional Euclidean Space, applicability, differential parameters, Riemannian geometry of n -space. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR THOMAS

255-256. PROJECTIVE GEOMETRY.—Postulational, synthetic treatment centering around Desargues' theorem and the principle of projectivity. Conics, coordinates, order, continuity, metric properties. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR THOMAS

271-272. INTRODUCTORY TOPOLOGY.—Topological properties of Euclidean spaces, set-theoretic and combinatorial methods. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR ROBERTS

285. MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.—Vectors, line and surface integrals, tensors, complex variables, differential and integral equations. Prerequisite: Mathematics 53. 3 s.h. (w)

PROFESSOR DRESSEL

286. MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.—Wave equation, Fourier series, heat equation, telegraphic equations, Legendre polynomials, Bessel functions, Schrödinger's equation. Prerequisite: Mathematics 53. 3 s.h. (w) PROFESSOR DRESSLE

291-292. THEORY OF FUNCTIONS.—Limits, implicit functions, power series, double series, Cauchy's theorem and its applications, residues, Riemann surfaces, conformal mapping. Prerequisite: Mathematics 53. 6 s.h. (w) PROFESSOR GERGEN

DEPARTMENTAL MAJOR

For the A.B. degree:

Prerequisite: Mathematics 5 and 6.

Major and Related Work: 42 semester hours.

Major Requirements: Mathematics 50, 51, 52, 53, and 12 semester hours in courses in mathematics numbered above 100.

Related Work: 18-24 semester hours of course work, ordinarily in the following departments: chemistry, economics and business administration, philosophy, physics. For the B.S. degree:

Prerequisite: Mathematics 5 and 6.

Major and Related Work: 48 semester hours.

Major Requirements: Mathematics 50, 51, 52, 53, and 12 semester hours in courses in mathematics numbered above 100.

Related Work: 14-24 semester hours of course work in the natural sciences.

MEDICAL SCIENCE

These courses in medical science have been approved by the Faculty Council as appropriate for the Bachelor's degree.

103. HUMAN PHYSIOLOGY.—A course in human physiology in which the functions of all organ systems are covered. Special emphasis is given to the study of neuro-muscular and cardiovascular functions. Lectures, laboratory experiments and demonstrations, and conferences. Limited to sixteen students. Primarily for physical therapy students. Prerequisites: Chemistry 1-2 and Zoology 1-2. 6 s.h. ASSOCIATE PROFESSOR MCCREA AND STAFF

109. ANATOMY RELATED TO MOTION.—A course in human anatomy in which the dissection is restricted to the muscles, bone, and joints and to the circulatory and nervous systems as they are related to movement. Lectures and laboratory. Prerequisite: Zoology 1-2. 8 s.h. PROFESSOR MARKEE AND STAFF

NAVAL SCIENCE

PROFESSOR FORD, CAPTAIN, U. S. NAVY, CHAIRMAN; ASSOCIATE PROFESSOR CLARKE, LIEUTENANT COLONEL, U. S. MARINE CORPS, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR LAWSON, LIEUTENANT COMMANDER, U. S. NAVY, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSORS DAWSON, LIEUTENANT COMMANDER, U. S. NAVY, KUBISZEWSKI AND PATTERSON, LIEUTENANTS, U. S. NAVY; AND ASSISTANT PROFESSOR READ, MAJOR, U. S. MARINE CORPS

Standardized titles and numbers for courses are established by the Bureau of Naval Personnel for use at the 52 NROTC institutions. The first digit indicates the year of the course; the second digit indicates whether semester or quarter (0 for semester, 1 for quarter); the third digit indicates the semester or quarter of school year in which offered. Specialized courses for Marine Corps officer candidates are indicated by the letter "M" after the number, and substitute for the basic course of the same number.

NS-101. NAVAL HISTORY AND ORIENTATION.—Naval courtesy and customs; history of sea power; the elements of sea power; applications of sea power in campaigns of the two World Wars; organization for national security in the United States. 3 s.h. (w) LIEUTENANT COLONEL CLARKE, LIEUTENANT COMMANDER LAWSON

NS-102. NAVAL HISTORY AND ORIENTATION.—Uniform code of military justice; deck seamanship; rules of the nautical road; naval formations and maneuvers; basic characteristics, capabilities, and limitations of naval vessel types; nomenclature; introduction to carrier air, surface, undersea, and amphibious warfare. 3 s.h. (w)

LIEUTENANT COLONEL CLARKE,
LIEUTENANT COMMANDER LAWSON

NS-201. NAVAL WEAPONS.—Evolution of naval ordnance; types and properties of explosives; principles in design and assembly of guns, ammunition, fuses; automatic weapons; basic designs in torpedoes, mines, anti-submarine devices; rockets, principles in the control of fire of naval weapons against air, surface, and underwater targets; nuclear explosives. 3 s.h. (w)

LIEUTENANT PATTERSON

NS-202. NAVAL WEAPONS.—The elements in the problem of control of naval gun fire, the principles of mechanical and electronic solution of the problems; basic principles, capabilities and limitations of radar, sonar, and guided missiles; shore bombardment. 3 s.h. (w)

LIEUTENANT PATTERSON

NS-301. NAVIGATION.—Magnetic and gyro compass; principles of chart construction; the sailings and dead reckoning; piloting; electronic and radar navigation; relative motion; rules of the nautical road; basic aerology and meteorology; maneuvering in storm areas. 3 s.h. (w)

CAPTAIN FORD; LIEUTENANT COMMANDER DAWSON

NS-301M. EVOLUTION OF THE ART OF WAR.—A survey of the evolution of weapons, strategy, tactics and material; illustration of the classic principles of war by a study of selected battles and campaigns; a summary of the development of U. S. military and foreign policy. 3 s.h. (w)

MAJOR READ

NS-302. NAVIGATION.—Nautical astronomy, including a study of the actual and apparent motion of earth, celestial coordinates, time systems, solutions of the astronomical triangle; solutions of observations for lines of position; use of the sextant; identification of stars and planets; complete day's work in practical navigation. 3 s.h. (w)

CAPTAIN FORD; LIEUTENANT COMMANDER DAWSON

NS-302M. MODERN BASIC STRATEGY AND TACTICS.—Modern tactical principles and techniques, especially on the small unit level, illustrated by contemporary historical examples; development of a general understanding of strategy. 3 s.h. (w)

MAJOR READ

NS-401. NAVAL MACHINERY AND DIESEL ENGINES.—Principles of steam engineering as related to naval installations for main propulsion; naval boilers, turbines, and related auxiliary machinery; pumps, distilling plants, and refrigeration. Basic principles of internal combustion engines, applications to propulsion installations for naval vessels, craft, and boats; fuels and lubricants. 3 s.h. (w)

LIEUTENANT KUBISZEWSKI

NS-401M. AMPHIBIOUS WARFARE.—History and development of amphibious operations and organization; analyses of amphibious operations of World War II and of the Korean action. 3 s.h. (w)

MAJOR READ

NS-402. SHIP STABILITY, NAVAL JUSTICE, AND LEADERSHIP.—The principles of ship stability and buoyancy in the practice of ship design, and in the practice of damage control. The procedures for, and the responsibility of, an officer in the administration of naval justice. The psychology and techniques of leadership. 3 s.h. (w)

LIEUTENANT KUBISZEWSKI

NS-402M. AMPHIBIOUS WARFARE, PART II.—Further study of selected amphibious operations; Uniform Code of Military Justice; leadership. 3 s.h. (w)

MAJOR READ

REQUIREMENTS FOR COMMISSION

Naval Science: 24 semester hours.

Other university courses: Completion of course requirements to qualify for a baccalaureate degree, or higher. These courses must include Math 6 (unless math through trigonometry successfully completed in secondary school); Physics 1, 2 or

51, 52, to be completed by the end of the sophomore year (mandatory for Regular students only). Physical training must be taken in accordance with University requirements and each student must include such instruction in swimming as to qualify him as a first class swimmer.

Summer training: Regular NROTC students must participate in three periods of training on board ship or at naval shore stations. Contract students are required to take one training cruise of about six weeks' duration, normally between the junior and senior years.

PHILOSOPHY

PROFESSOR NEGLEY, CHAIRMAN; ASSISTANT PROFESSOR WELSH, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR PEACH, SUPERVISOR OF FRESHMAN INSTRUCTION;
PROFESSORS BAYLIS AND PATTERSON; VISITING ASSISTANT
PROFESSOR BUCK; DR. CLARK

48. LOGIC.—A study of the conditions of effective thinking and clear communication, and of typical sources of fallacies. Examination of the basic principles of *deductive* reasoning (making explicit the implications of statements) and of *inductive* reasoning (the formulation and testing of hypotheses on the basis of experience and experiment). Emphasis on practical illustrations and applications. 3 s.h. (E & W) ASSISTANT PROFESSORS WELSH AND BUCK; DR. CLARK

49. ETHICS.—An introductory consideration of basic ethical concepts and principles as developed in European and American thought and culture. 3 s.h. (E & W) PROFESSORS BAYLIS AND NEGLEY; ASSISTANT PROFESSOR WELSH

91. INTRODUCTION TO PHILOSOPHY.—A systematic and historical examination of the major problems of knowledge, morals, and metaphysics. 3 s.h. (E & W) PROFESSOR PATTERSON; ASSISTANT PROFESSORS PEACH, WELSH, AND BUCK; DR. CLARK

93. HISTORY OF PHILOSOPHY; ANCIENT AND MEDIEVAL.—A study of the major philosophers of the period with special reference to the continuity of their thought. 3 s.h. (E) PROFESSOR PATTERSON; ASSISTANT PROFESSOR BUCK

94. HISTORY OF PHILOSOPHY; MODERN.—A study of the major philosophers of the period with special reference to the continuity of their thought. 3 s.h. (E & W) ASSISTANT PROFESSOR PEACH

97. POLITICAL AND SOCIAL PHILOSOPHY.—Discussion of the fundamental principles of political and social organization, with particular attention to democratic philosophy, corporate theory, and Marxist ideology. 3 s.h. (E) PROFESSOR NEGLEY

98. SOCIAL IDEALS AND UTOPIAS.—Reading of selected Utopias; analysis of the value-structures and political principles of these ideal societies. 3 s.h. (E) PROFESSOR NEGLEY

103. SYMBOLIC LOGIC.—Detailed analysis of deduction and of deductive systems. 3 s.h. (W) DR. CLARK

104. PHILOSOPHY OF SCIENCE.—The principal philosophical and methodological problems in contemporary science. 3 s.h. (W) DR. CLARK

109. INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE.—Examination and discussion of such problems as the origin of language, sign-using behavior, definition, the nature of interpretation, and special uses of language; scientific, poetic, persuasive. 3 s.h. (W) ASSISTANT PROFESSOR WELSH

115. REASON AND COMMON SENSE IN 17TH AND 18TH CENTURY BRITISH THOUGHT.—Studies in the theories of reason and sentiment following Hobbes, and the development of opposition between rational, common sense, and empirical theories of knowledge and conduct. Reading in Cumberland, Shaftesbury, Hutcheson, Reid, and others. 3 s.h. (E) ASSISTANT PROFESSOR PEACH

116. THE DEVELOPMENT OF PHILOSOPHY IN AMERICA.—A historical and critical survey of the leading philosophical movements from Colonial times to the present. 3 s.h. (E) PROFESSOR NEGLEY

117. HISTORY OF ETHICS.—A survey and analysis of the ethical systems of the great philosophers. Readings in original sources. 3 s.h. (E) ASSISTANT PROFESSOR WELSH

199. PHILOSOPHY OF RELIGION.—A critical examination of the facts of religious experience and their bearing upon metaphysics. 3 s.h. (E) PROFESSOR PATTERSON

FOR SENIORS AND GRADUATES

201. PHILOSOPHY OF ART.—A study of some fundamental issues in aesthetics, with particular reference to the fields of literature, music and painting. Problems discussed include: the nature and purposes of the arts; meaning in the arts; art and morality; the role of standards in art criticism; aesthetic judgment; interpretation and evaluation. 3 s.h. (E) ASSISTANT PROFESSOR WELSH

203. CONTEMPORARY ETHICAL THEORIES.—Reading and critical examination of the principal contributions to ethics by twentieth-century American and British moralists. 3 s.h. (E) PROFESSOR BAYLIS

205. THE PHILOSOPHY OF HISTORY.—An enquiry into the logic and methodology of the knowledge of history and into the metaphysical implications of history. 3 s.h. (E) PROFESSOR NEGLEY

208. POLITICAL PHILOSOPHY.—Analysis of the structure of social organization with particular reference to the function of legislation in democratic politics. 3 s.h. (E) PROFESSOR NEGLEY

209. THE PHILOSOPHY OF RELIGION.—A critical and constructive study of the nature of religion, of its various forms and manifestations, and of its functions in human life. 3 s.h. (E) PROFESSOR PATTERSON

211. PLATO.—3 s.h. (E) PROFESSOR PATTERSON

212. HISTORY OF MODERN PHILOSOPHY.—3 s.h. (E) ASSISTANT PROFESSOR PEACH

213-214. HISTORY OF AESTHETICS.—Theories of art and beauty from Pythagoras to Croce. 3 s.h. (E)

217. ARISTOTLE.—3 s.h. (E) PROFESSOR PATTERSON

218. MEDIEVAL PHILOSOPHY.—A study of the philosophy of the Middle Ages, with special attention to selected texts from the works of leading Christian, Jewish, and Arabian philosophers. 3 s.h. (E) PROFESSOR PATTERSON

223. CONTEMPORARY PHILOSOPHY: IDEALISM.—Examination and analysis of the idealist position in recent and contemporary philosophy, with special attention to the works of Bradley and Jordan. 3 s.h. (E) PROFESSOR NEGLEY

224. CONTEMPORARY PHILOSOPHY: REALISM.—A critical analysis, comparison, and evaluation of the several varieties of recent realistic theories, presentative and representative. 3 s.h. (E) PROFESSOR BAYLIS

225. LOCKE, BERKELEY, HUME.—3 s.h. (E)

231. PHILOSOPHY OF SCIENCE.—A historical and critical survey of the basic philosophical ideas underlying the development of modern science. 3 s.h. (E)

232. SPECIAL PROBLEMS IN PHILOSOPHY OF SCIENCE.—Investigation by students of advanced problems in philosophy of science, with special attention to a field determined by student's interest. 3 s.h. (w) DR. CLARK

236. ORIENTAL PHILOSOPHY.—A study of the genesis of philosophical ideas in the Upanishads and the Bhagavadgita, and of the development of the orthodox systems and of the philosophies of the Jains and the Buddhists. 3 s.h. (E) PROFESSOR PATTERSON

241. LOGIC.—Fundamental principles of valid deductive reasoning. 3 s.h. (w)
DR. CLARK

250. PHILOSOPHICAL ANALYSIS.—A critical study of recent and contemporary essays in philosophical analysis, and an evaluation of the nature, methods, and results of this movement. 3 s.h. (E)
PROFESSOR BAYLIS

251. EPISTEMOLOGY.—3 s.h. (E)
PROFESSOR BAYLIS

252. METAPHYSICS—3 s.h. (E)
PROFESSOR BAYLIS

253. CONTEMPORARY BRITISH PHILOSOPHY.—A consideration of philosophical doctrines and methods which are characteristic of British philosophy today; with special emphasis on contrasts with American and continental views and approaches. 3 s.h. (E)
ASSISTANT PROFESSOR BUCK

DEPARTMENTAL MAJOR

Major Requirements: Twenty-four semester hours in philosophy including the following:

Philosophy 93 and 94.

Philosophy 117, 203, or 208.

6 semester hours in Philosophy senior-graduate courses.

Programs of study for departmental majors must be approved by the Director of Undergraduate Studies of the department.

PHYSICS

PROFESSOR NIELSEN, CHAIRMAN; ASSISTANT PROFESSOR LEWIS, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSOR CARPENTER, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS GORDY, HATLEY, LONDON, NEWSON, NORDHEIM, AND SPONER; ASSOCIATE PROFESSORS FAIRBANK AND GREULING; ASSISTANT PROFESSORS BLOCK AND WILLIAMSON; AND ASSISTANTS

A student wishing to major in physics should arrange to complete the necessary mathematics as soon as possible.

1-2. INTRODUCTORY PHYSICS.—This course traces historically and experimentally the development of the important principles of physics. This course is open to freshmen, sophomores and juniors and meets the general science requirement. Three hours of recitation and one two-hour laboratory each week. 8 s.h. (w)
PROFESSOR CARPENTER AND STAFF; AND ASSISTANTS

51-52. GENERAL PHYSICS.—This course treats the basic principles of general physics in a more quantitative manner than Physics 1-2. It is designed for sophomores and juniors, and meets in a thorough way the physics requirement for entrance into the study of either medicine or engineering, and is well suited for the general science student. A limited number of freshmen who present physics for entrance and who are taking the required mathematics concurrently may be admitted by permission of the instructor. This course is not open for credit for students who have completed Physics 1-2. Four lecture-recitations and one three-hour laboratory period each week. Prerequisites: Mathematics 5-6 or equivalent (Mathematics 6 may be taken concurrently). 10 s.h. (w)

PROFESSOR CARPENTER AND STAFF; AND ASSISTANTS

125. INTERMEDIATE PHYSICS—MECHANICS.—The course covers in a thorough manner the elements of mechanics. Three recitations per week. Prerequisites: Physics 1-2 or 51-52 or equivalent, and a course in differential and integral calculus which may be taken concurrently. 3 s.h. (w)
PROFESSOR NIELSEN

126. INTERMEDIATE PHYSICS—ELECTRICITY.—The elements of electricity and magnetism. Three lectures and one three-hour laboratory per week. Prerequisites: Physics 125 or equivalent work approved by the instructor, and differential and integral calculus. Integral calculus may be taken concurrently. 4 s.h. (w)
ASSISTANT PROFESSOR LEWIS

175. INTERMEDIATE PHYSICS—OPTICS.—The elements of geometrical and physical optics. Three recitations and one three-hour laboratory per week. Prerequisites: Physics 125 and 126 or equivalent work approved by instructor, and differential and integral calculus. 4 s.h. (w) PROFESSOR SPONER

176. INTERMEDIATE PHYSICS—THERMODYNAMICS AND KINETIC THEORY.—The elements of thermodynamics and kinetic theory and elementary statistical mechanics. Three recitations per week. Prerequisites: Physics 125 or equivalent work approved by the instructor, and differential and integral calculus. 3 s.h. (w) ASSOCIATE PROFESSOR FAIRBANK

A course in general college physics, Physics 125 and 126 or equivalent validated by examination, and a course in differential and integral calculus are prerequisites to all courses numbered 200 and above.

201-202. MECHANICS.—The fundamental principles of statics and the dynamics of particles and rigid bodies. Three recitations each week. 6 s.h. (w)

PROFESSOR NORDHEIM

203. ELECTRICITY AND MAGNETISM.—Fundamentals of electricity and magnetism. Electrostatics and magnetostatics. Direct current circuits and networks—bridges, potentiometers, galvanometers, alternating current circuits and networks. Electromagnetic waves. 3 s.h. (w) ASSISTANT PROFESSOR LEWIS

213-214. CONTEMPORARY PHYSICS.—A course which covers the fundamental concepts and the experimental basis of modern physics. Three lectures each week. 6 s.h. (w) ASSISTANT PROFESSOR LEWIS

217-218. ADVANCED PHYSICS LABORATORY.—Measurements involving the fields of mechanics, electricity, magnetism, heat, sound, optics and modern physics. 2-6 s.h. (w) THE STAFF

219 ELECTRON TUBES AND THEIR APPLICATION.—Fundamentals of electron tubes. Motion of charged particles, space charge, gaseous conduction. Electron tube circuits. Three hours of lecture and one three-hour laboratory per week. 4 s.h. (w) PROFESSOR GORDY

220. ELECTRONIC CIRCUIT ANALYSIS.—Linear and non-linear circuit analysis, electric oscillations, operation of filters, Fourier analysis of wave phenomenon, coupling in electrical circuits. 3 s.h. (w) ASSISTANT PROFESSOR WILLIAMSON

225-226. ELEMENTARY INVESTIGATIONS.—The aim of this course is to provide training in the laboratory and library methods of physical research. Properly qualified students may conduct elementary investigations under the supervision of a member of the staff. 3-6 s.h. (w) THE STAFF

DEPARTMENTAL MAJOR

A. For the A.B. degree:

Prerequisites: Physics 1-2 or 51-52 or equivalent, and Mathematics 5-6.

Major Requirements: Eighteen to 24 semester hours in physics including Physics 125, 126, 175 and 176 or equivalent.

Related Work: Eighteen to 24 semester hours from the following courses: Mathematics 51, 52, 53 and 131, and Chemistry 1-2.

B. For the B.S. degree:

Prerequisites: Physics 1-2 or 51-52 or equivalent, and Mathematics 5-6 or equivalent.

Major Requirements: Twenty-four to 34 semester hours in physics including Physics 125, 126, 175 and 176 or equivalent.

Related Work: Fourteen to 24 semester hours from the following courses: Mathematics 51, 52, 53 and 131, and Chemistry 1-2.

POLITICAL SCIENCE

PROFESSOR RANKIN, CHAIRMAN; PROFESSOR CONNERY, DIRECTOR OF UNDERGRADUATE STUDIES;
 PROFESSORS COLE, HALLOWELL, VON BECKERATH AND WILSON; LECTURER ELLIS;
 ASSOCIATE PROFESSORS SIMPSON AND BRAIBANTI; ASSISTANT
 PROFESSORS CHEEK AND HANSON; DR. HALL

The general objective of the Department of Political Science is to acquaint students with the theory and practice of government and politics at the local, state, national and international levels. While primary attention is focused upon the American political and administrative system, emphasis is also placed upon a comparative study of the political institutions and movements of thought peculiar to the nations of Europe, Latin America and the Far East. The student's attention is also directed to the problems encountered in international organization, politics and law. The development of political theories from Plato to the present day is an essential part of the department's course offerings. Methods of study include the descriptive, the historical, the legal, the comparative and the philosophical.

Directing its effort to an intelligent understanding of the contemporary world and of the responsibilities which are laid upon citizens of a democracy, the Department of Political Science shares the general objectives of a liberal arts education. While the department does not aim at vocational education, the knowledge it seeks to impart should be useful to anyone contemplating a career in the government service or politics.

Students intending to major in the department should take Political Science 11-12, 61-62, or 63-64. No student may take more than one of these three courses for credit. Ordinarily one of them must be taken before proceeding to more advanced work in the department. This rule may be waived with the consent of the instructor giving the advanced course.

The advanced courses are divided into three major groups but no sequence of courses beyond the introductory course is prescribed. The student would be well advised, however, to select some courses from each group.

The Senior Seminars are designed to provide an opportunity for majors in the department to pursue independent study and research.

INTRODUCTORY COURSES

11-12. THE AMERICAN SYSTEM OF GOVERNMENT.—An introductory study of the principles and operation of the American government in the light of the present world position of the United States. (Only open to Freshmen.) 6 s.h.
 (E & W) STAFF

[Students who complete 11 in the spring semester should thereafter take course 62 instead of 12.]

61-62. AMERICAN GOVERNMENT AND POLITICS.—A study of the American constitutional and political system. Among other topics attention is given to the development of the constitution, federal-state relations, political parties and the organization and functions of the national, state and local governments. 6 s.h.
 (W & E) PROFESSOR CONNERY; ASSOCIATE PROFESSOR SIMPSON; ASSISTANT
 PROFESSORS CHEEK AND HANSON; DR. HALL

[Not open to freshmen or to students who have had courses 11-12 or 63-64.]

63-64. MODERN CONSTITUTIONAL GOVERNMENT.—Principles and institutions of modern constitutional government, the first semester being devoted to American government, the second to government outside the United States. 6 s.h.
 (W & E) DR. ELLIS

[Not open to Freshmen or to students who have had courses 11-12 or 61-62.]

POLITICAL THEORY AND COMPARATIVE GOVERNMENT

123. INTRODUCTION TO POLITICAL PHILOSOPHY.—A course devoted to the reading and discussion of selected political classics including Plato's *Republic*, Aristotle's *Ethics* and *Politics* and other works as time permits. 3 s.h. (W)

PROFESSOR HALLOWELL

136. MAJOR EUROPEAN GOVERNMENTS.—A general introductory survey of the governments of Great Britain, France, Germany, Italy, and the Soviet Union. Special attention is given to constitutional developments, the organization and ideologies of political parties, and current political problems. 3 s.h. (w)

PROFESSOR COLE AND ASSISTANT PROFESSOR HANSON

151. GOVERNMENTS AND POLITICS OF MEXICO AND THE CARIBBEAN AREA.—A study of their contemporary governments, political problems and international relations. 3 s.h. (w)

DR. ELLIS

152. THE GOVERNMENTS AND POLITICS OF SOUTH AMERICA.—The constitutional development, governmental organization, inter-American co-operation and political problems of the principal South American states. 3 s.h. (w)

DR. ELLIS

180. JURISPRUDENCE.—The development of legal systems and institutions together with a consideration of representative philosophies of law from ancient times to the present day. 3 s.h. (w)

PROFESSOR HALLOWELL

211. POLITICAL INSTITUTIONS OF THE FAR EAST.—An analysis of the ideas underlying the development of government in Japan, China, and Korea. Study of the writings of Lao-tse, Confucius and the sacred books of Buddhism and Shinto. Particular attention is given to the theory of Confucian bureaucracy, the Taikwa Reform, the development of the Tokugawa administrative state, the constitutional reforms of Sun-Yat-sen in China and of the Meiji Era in Japan. 3 s.h. (w)

ASSOCIATE PROFESSOR BRAIBANTI

223. POLITICAL THOUGHT TO THE SEVENTEENTH CENTURY.—A survey from the time of Plato to the close of the seventeenth century; Graeco-Roman, Patristic and Germanic thought; individualism and cosmopolitanism; effect of the Church-State controversy and the conciliar movement; medieval constitutionalism; legislative sovereignty. 3 s.h. (w)

PROFESSOR WILSON

224. MODERN POLITICAL THEORY.—An historical survey and philosophical analysis of political theory from the beginning of the seventeenth to the middle of the nineteenth century. Attention is given to the rise of liberalism, the Age of Enlightenment, the romantic and conservative reaction, idealism and utilitarianism. 3 s.h. (w)

PROFESSOR HALLOWELL

225. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European constitutional government and politics. 3 s.h. (w)

PROFESSOR COLE

226. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European authoritarian and dictatorial government and politics. 3 s.h. (w)

PROFESSOR COLE

229. RECENT AND CONTEMPORARY POLITICAL THEORY.—The rise of positivism and its impact upon modern political thought, the origins of socialism, Marxism and its variants, socialism in the Soviet Union, nationalism, Fascism and National Socialism, the crisis in modern democracy, Christianity and the social order. 3 s.h. (w)

PROFESSOR HALLOWELL

231. AMERICAN POLITICAL THEORY.—An analysis of the main currents in American political thought from colonial beginnings to the present day, with emphasis upon the development of liberalism in America. 3 s.h. (w)

PROFESSOR HALLOWELL

235. THE BRITISH COMMONWEALTH.—An analysis of the political relationships between the members of the Commonwealth and a comparative study of the governments of the Dominions, with particular reference to Canada. 3 s.h. (w)

PROFESSOR COLE

252. SPANISH-AMERICAN CONSTITUTIONALISM.—A comparative study of the nature, sources, and use of political authority in the constitutional law of Argentina, Chile, Colombia, and Uruguay. 3 s.h.

AMERICAN GOVERNMENT AND PUBLIC ADMINISTRATION

125. AMERICAN POLITICAL PARTIES AND PRACTICAL POLITICS.—A study of the historical development, organization, and methods of political parties in the United States. 3 s.h. (w)
ASSOCIATE PROFESSOR SIMPSON

141. PUBLIC ADMINISTRATION.—An introduction to the role of administration in the governmental process considering principles of administrative organization, methods of administrative control, personnel and fiscal management. In general the study of the organizational and administrative problems encountered by any government agency charged with carrying out a public policy. 3 s.h. (w)
DR. HALL

146. LEGISLATION.—A study of the composition and structures of legislative bodies and of the legislative process with attention to procedure, methods, techniques, delegation of discretion, and the use of controls. 3 s.h. (w)
ASSOCIATE PROFESSOR SIMPSON

161. GOVERNMENT AND PLANNING.—A study of special areas in government planning. The semester's work is divided into three parts: city planning—land use and zoning, housing and urban redevelopment; resource planning—the governmental problems involved in planning for the conservation and use of natural resources, with special attention given to multi-purpose development of the river and its watershed, and a brief consideration of proposals and developments in the general field of economic planning. 3 s.h. (w)
ASSISTANT PROFESSOR HANSON

164. GOVERNMENT CONTROL OF THE SOCIAL AND ECONOMIC ORDER.—A study of governmental and administrative problems in the regulation of trade and the enforcement of the anti-trust laws, the regulation of transportation and communications and the role of the government in collective bargaining. Consideration is also given to the philosophic aspects of the general growth of government control of industry. 3 s.h. (w)
ASSISTANT PROFESSOR HANSON

174. POLITICS AND ECONOMICS.—An analysis of the influence of politically dominant forces and ideologies upon economic policies and of economics upon politics in societies of principal Western countries since the seventeenth century. 3 s.h. (w)
PROFESSOR VON BECKERATH

190. PUBLIC PERSONNEL ADMINISTRATION.—Principles, problems, and functions of government personnel administration; formal and informal organization for personnel management; comparison of public employment philosophies, policies and services with general personnel management, including recruitment, promotion, training, classification, morale and discipline, compensation, and retirement of public employees. 3 s.h. (E)
ASSISTANT PROFESSOR CHEEK

191. TOPICS IN LOCAL GOVERNMENT.—Problems in the general area of county and local government including the administration of government services such as education, public welfare, law enforcement; inter-governmental relationships; administrative reorganization; methods of popular control; and the reconstruction of state and local government so as to meet present-day needs. 3 s.h. (E)
ASSISTANT PROFESSOR CHEEK

207. AMERICAN CONSTITUTIONAL LAW AND THEORY.—A study of leading principles of American government, as developed through judicial interpretation of the Constitution. 3 s.h. (w)
PROFESSOR RANKIN

209. PROBLEMS IN STATE AND LOCAL GOVERNMENT IN THE UNITED STATES.—A study of the historical development of state and local governments, their present organizations and subdivisions, and their relation to each other. Special attention is given to the position of the states in the federal union through the study of federal-state, inter-state, and state-local relations. 3 s.h. (w)
PROFESSOR RANKIN

230. AMERICAN POLITICAL INSTITUTIONS.—A study of the formation and development of institutions of the national government in the United States, with historical and analytical treatment. Among other topics this course is concerned with the Constitutional Convention of 1787, and the development of Congress, the Presidency, and the Supreme Court. 3 s.h. (w)
PROFESSOR RANKIN

241. ADMINISTRATIVE MANAGEMENT.—An advanced course in public administration with special attention being given to the development of scientific management, its application to government in the United States and a consideration of current problems in organization, procedures, work simplification, and management improvement. 3 s.h. (w)
PROFESSOR CONNERY

242. NATIONAL ADMINISTRATION.—A study of the administrative organization, working concepts and procedures of the United States Government, illustrated through the operations of the Bureau of the Budget. 3 s.h. (w)
PROFESSOR CONNERY

246. GOVERNMENT ADMINISTRATION AND PUBLIC POLICY.—Through use of the laboratory and case study techniques, a consideration of the types of administrative problems that the United States Government encounters in the field of public policy, and their possible solution. 3 s.h. (w)
PROFESSOR CONNERY

271. SOCIOPOLITICS AND CAPITALISM.—Labor and labor policies in Western Europe and the United States in the nineteenth and twentieth centuries; the development of monopoly power and political power of labor in recent decades. 3 s.h. (w)
PROFESSOR VON BECKERATH

291. PROBLEMS OF MUNICIPAL GOVERNMENT.—An analysis of problems relating to the structural system and activities of municipalities in the United States. 3 s.h. (w)
PROFESSOR RANKIN

292. MUNICIPAL ADMINISTRATION.—A study of principles and methods relating to municipal administration in the United States. 3 s.h. (w)
PROFESSOR RANKIN

INTERNATIONAL LAW AND RELATIONS

121. ELEMENTS OF INTERNATIONAL RELATIONS.—Analysis of international politics, of the foundations of national power, and of international cooperation, with emphasis upon attempted solutions of the central problems of international security. 3 s.h. (w)
DR. ELLIS

122. MODERN INTERNATIONAL POLITICS.—A survey of politics leading to the two World Wars with emphasis upon present day conditions resulting from these major conflicts. 3 s.h. (w)
DR. ELLIS

Students who have received credit for History 135-136 may not receive credit for this course.

131. SURVEY OF FAR EASTERN POLITICS.—An introductory survey of international politics in Eastern Asia and the Western Pacific; the rise of Japan as a modern state; China's struggle for political unity, independence and national development. 3 s.h. (Formerly Political Science 111) (w)
DR. ELLIS AND ASSOCIATE PROFESSOR BRAIBANTI

132. CONTEMPORARY PROBLEMS IN FAR EASTERN POLITICS.—The impact of World War II and its aftermath on political institutions and economic structures in the Pacific area. 3 s.h. (Formerly Political Science 112) (w)
DR. ELLIS AND ASSOCIATE PROFESSOR BRAIBANTI

158. CONTROL OF AMERICAN FOREIGN POLICY.—A consideration of the forces which are responsible for the formulation of American foreign policy, and a study of the important factors which have influenced contemporary United States policy in the major areas of the world. The course includes an analysis of the respective roles of the President, Congress, Department of State, and the United Nations, as well as military and public opinion. 3 s.h. (w)

212. INTERNATIONAL POLITICS OF THE FAR EAST.—An analysis of the relations of China, Japan and Korea *inter se* and with outside powers, with emphasis upon changing power relationships within the Asian cultural sphere. 3 s.h. (w)
ASSOCIATE PROFESSOR BRAIBANTI

221. INTERNATIONAL PUBLIC ORGANIZATION.—A study of the structure and functioning of the United Nations organs, of related specialized agencies such as the International Labor Organization, and of regional agencies such as the Organization of American States. 3 s.h. (w)
PROFESSOR WILSON

227-228. INTERNATIONAL LAW.—Elements of international law, particularly as interpreted and applied by the United States; rights and duties of states with respect to recognition, state territory and jurisdiction, nationality, diplomatic and consular relations, treaties, treatment of aliens, pacific settlement of disputes, international regulation of the use of force, and collective security. 6 s.h. (w)

PROFESSOR WILSON

UNDERGRADUATE SEMINARS

201. SENIOR SEMINAR IN POLITICAL SCIENCE.—A seminar intended primarily for majors in Political Science, devoted to the reading, discussion and analysis of major works in modern and contemporary political science. Students are expected to prepare papers on relevant topics for group discussions. Open only to seniors. Prerequisite: consent of the instructor. 3 s.h. (w) PROFESSORS COLE AND HALLOWELL

202. SENIOR SEMINAR IN POLITICAL SCIENCE.—Intended primarily for majors in Political Science, this seminar provides an opportunity for the application of principles to current political problems. It provides a means whereby specially qualified students can make a concentrated study of some problem of their own choice. Papers are required and special attention is given to research methods and materials. Political Science 201 is recommended but not required. Open only to seniors. Prerequisite: consent of the instructor. 3 s.h. (w) PROFESSOR CONNERY

DEPARTMENTAL MAJOR

Prerequisite: Political Science 11-12 or 61-62 or 63-64.

Major Requirements: Eighteen semester hours of work in the Department above courses 11-12 or 61-62 or 63-64, including at least nine semester hours in Senior-Graduate courses.

Related Work: Six hours each in two departments approved by the Political Science adviser. Courses may not be those primarily open to freshmen. Usually related work is taken in the Departments of History, Economics, Sociology, or Philosophy.

PSYCHOLOGY

PROFESSOR RODNICK, CHAIRMAN; ASSISTANT PROFESSOR GARMEZY, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSORS ADAMS, DAI, KOCH, KUDER, LUNDHOLM, AND ZENER; ASSOCIATE PROFESSORS BANHAM, COHEN, KIMBLE, AND LODGE; ASSISTANT PROFESSORS BORSTELMANN, COLLIER, GUTTMAN, JONES, MCHUGH, AND REICHENBERG-HACKETT; VISITING ASSISTANT PROFESSOR KALISH; LECTURERS BLEKE AND GOLDSTONE

Three or six semester hours in psychology may be used to meet the Social Science and History requirement for the A.B. Degree. The courses which will meet the requirement are: Psychology 91 or Psychology 91 plus either Psychology 100 or 101.

Psychology 91 or its equivalent is a prerequisite for all other courses in psychology. Six semester hours in psychology (including Psychology 91) or special permission of the course instructor or the director of undergraduate studies are required for admission to Psychology 144, 145, 148, 206, 212, 215, and 236.

91. INTRODUCTORY PSYCHOLOGY.—An introduction to the facts, principles, and problems of normal adult psychology through a study of psychological methods as applied to motivation, emotions, perception, sensation, thinking, memory, learning, individual differences, and personality. Offered both semesters. 3 s.h. (E & W) STAFF

100. PERSONALITY AND SOCIAL BEHAVIOR.—A survey of basic psychological principles underlying the study of personality in relation to the social environment. Among the topics discussed are the development and modification of behavior, the process of socialization of the individual, factors influencing adjustment to the social environment, the interaction of culture and personality. 3 s.h. (E) ASSISTANT PROFESSORS GARMEZY AND REICHENBERG-HACKETT

101. **INTRODUCTORY SOCIAL PSYCHOLOGY.**—A survey of problems, concepts and methods in the study of social relations and group behavior. Topics to be discussed include: socio-cultural factors in the development of motives, values, and attitudes; psychological factors underlying the development of group opinions; the study of small-group behavior with emphasis on social influences and communication; social change and social movements. 3 s.h. (E & W)

ASSISTANT PROFESSORS JONES AND MCHUGH

104. **COMPARATIVE PSYCHOLOGY.**—An examination of the bearing upon general psychological theory, especially in the fields of motivation, learning, and development of observations and experimental investigations of animal behavior. 3 s.h. (E) Not offered 1954-55.

106. **ABNORMAL PSYCHOLOGY.**—A systematic presentation of the psychology of functional mental disorders with emphasis on its bearing upon general psychological theory. 3 s.h. (E)

PROFESSOR LUNDHOLM

110. **APPLIED PSYCHOLOGY.**—Applications of psychology to problems of personnel selection, industrial efficiency, advertising and selling, and other problems of practical interest. 3 s.h. (E)

ASSISTANT PROFESSOR MCHUGH

111. **ADVANCED GENERAL PSYCHOLOGY.**—A more intensive study of several selected problem areas in the field of general psychology with special emphasis on experimental methods and findings in the areas considered. 3 s.h. (E) Not offered 1954-55.

116. **PSYCHOLOGY OF ADJUSTMENT.**—The course is planned to give an adequate understanding of problems of adjustment and of mental hygiene. Lectures and discussions cover an application of the principles and findings of normal and abnormal psychology as these relate to the adjustment of the average individual in our changing society; a survey of the principles of mental hygiene; discussions of current socio-cultural trends significant for individual adjustment. 3 s.h. (E)

*ASSISTANT PROFESSOR REICHENBERG-HACKETT

Not open to students who have had Education 68.

119. **ELEMENTARY LABORATORY PSYCHOLOGY.**—A sequence of experiments with human and animal subjects on selected problems in learning, motivation, emotion and sensory processes. Emphasis will be placed upon the techniques involved in the design and execution of experiments and in the analysis and interpretation of scientific data. Laboratory and lecture. 4 s.h. (E).

ASSISTANT PROFESSOR GUTTMAN

120. **BASIC STATISTICAL TECHNIQUES IN PSYCHOLOGY.**—The application of elementary statistical techniques to the collection, analysis, and interpretation of data in psychological research. 3 s.h. (E)

ASSISTANT PROFESSOR COLLIER

121. **CHILD PSYCHOLOGY.**—A detailed study of the practical problems of infancy and early childhood, with special emphasis upon learning, emotional development, social adjustment, and modern conceptions and methods of child training and guidance. 3 s.h. (E)

ASSISTANT PROFESSOR MCHUGH

Not open to students who have had Education 118.

122. **ADJUSTMENT OF THE PRE-SCHOOL CHILD.**—Study and application of techniques of observing, recording and interpreting the behavior of the pre-school child. The course is designed to meet the needs of students interested in the personality development and social adjustment of children, to train them in techniques of observing and interpreting the physical, emotional, and intellectual development of the individual child; the role of each child within the social structure of a play group, and a study of the development of group integration. One hour lecture and 4 hours laboratory. Permission of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR REICHENBERG-HACKETT

126. **ADOLESCENT PSYCHOLOGY.**—The mental, social, and emotional development of adolescence and youth will be studied, with special attention given to such topics as interests, motivations, home problems, sex differences, recreation, delinquency, and development for citizenship. Prerequisite: Psychology 121 or Education 118. 3 s.h. (E)

ASSISTANT PROFESSOR MCHUGH

130. PRINCIPLES AND METHODS OF PSYCHOLOGICAL EVALUATION.—

This is an introductory course in test methods used by psychologists in measuring and evaluating mental processes. The nature, purposes and utilization of various types of tests and psychological techniques will be discussed and demonstrated. Among the tests to be studied will be standard scales of intelligence, verbal and performance, individual and group methods; tests of special abilities, aptitudes, attitudes and interests; personality tests, rating scales and projective methods. 3 s.h. (E)

ASSOCIATE PROFESSOR BANHAM

132. THE PSYCHOLOGY OF INDIVIDUAL DIFFERENCES.—

A study of the nature and causes of individual and group variations in intelligence, special abilities, social and emotional characteristics. These will be considered in relation to developmental sequence, aging factors, sex, race and socio-economic conditions. 3 s.h. (E)

ASSOCIATE PROFESSOR BANHAM

141. PERSONALITY AND BEHAVIOR DISORDER.—

Behavior disorder and neurotic symptom formation are studied from the viewpoint of the psychological principles underlying the adjustment of the deviant personality. 3 s.h. (E)

PROFESSOR RODNICK

144. LEARNING AND MOTIVATION.—

A survey of the basic facts and principles of human and animal learning and motivation. Topics covered include conditioning, trial and error learning, insightful learning, primary and secondary motivation, the relationship between motivation and learning and cultural variations in motives. Students in the course will perform a series of representative experiments. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)

ASSOCIATE PROFESSOR KIMBLE

145. EXPERIMENTAL APPROACHES TO PERSONALITY.—

A survey of psychological studies related to anxiety, conflict and frustration behavior and their implications for personality organization and development. Students will perform a series of representative experiments. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)

ASSISTANT PROFESSOR GARMEZY

146. EXPERIMENTAL PSYCHOLOGY IN INDUSTRY AND ENGINEERING.—

Applications of psychological principles to the solution of problems in industry and engineering. Topics covered include visual and auditory communication, visibility and legibility, visual display, control design, machine design, motivational and learning factors influencing production. Representative studies will be reviewed. Students in the course will perform several pertinent experiments. 3 s.h. (E)

ASSISTANT PROFESSOR COLLIER

148. PSYCHOLOGY OF PERCEPTION AND THINKING.—

A study of the basic phenomena of perception and thinking as determined by the stimulus situation, motivation, learning and personality variables. Students will perform a series of representative experiments. Prerequisites: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)

PROFESSOR ZENER

203. PURPOSIVE PSYCHOLOGY: CONATION AND OUR CONSCIOUS LIFE.—

A systematic presentation of the psychology of adult human achievements, adaptive as well as creative, with emphasis upon the significance for these endeavors of the acts of experiencing. 3 s.h. (E)

PROFESSOR LUNDHOLM

206. SOCIAL PSYCHOLOGY.—

A study of the constitution of society by man and of man by society. An analysis of social-psychological phenomena, such as: kinds of membership character, social movements, status and role-taking behavior, social determinants of perception and personality development and perceptual determinants of societies. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)

PROFESSOR ADAMS

212. **PHYSIOLOGICAL PSYCHOLOGY.**—A survey of the interrelationships of biological and psychological factors in behavior, with particular reference to reflex action, motivation, learning and emotion. Emphasis will be placed on the relation between psychological theories and biological data. Presupposes Introductory Zoology. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) ASSISTANT PROFESSOR GUTTMAN

215. **DEVELOPMENTAL PSYCHOLOGY.**—Theory of personality structure and the changes it undergoes in development from infancy to old age, learning, conflict, character, intelligence, developmental crises, etc.; evaluation of researches on personality dynamics; lectures, readings, motion picture demonstrations. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) PROFESSOR ADAMS

223. **ABNORMAL PSYCHOLOGY.**—A systematic presentation of the psychology of functional mental disorders with emphasis on its bearing upon general psychological theory. This course constitutes a slightly more technical survey of the same topic matter as Psychology 106. Seniors who have taken Psychology 106 are not eligible for Psychology 223. 3 s.h. (E) PROFESSOR LUNDHOLM

231-232. **INTRODUCTION TO RESEARCH.**—Restricted to senior psychology majors with at least a "B" average in psychology who have completed Psychology 119, Psychology 120 and one course from among 144, 145, and 148. Before registration an outline of the project must be submitted for written approval by a departmental committee and by the staff member to whom it assigns the supervision of the research. (E) STAFF

236. **THEORETICAL PSYCHOLOGY.**—This course will be devoted to the analysis of techniques of theory construction in psychology. The discussion of these methodological issues will be coordinated with the analysis of concrete formulations in contemporary psychological theory. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) Not offered in 1954-55. PROFESSOR KOCH

DEPARTMENTAL MAJOR

Prerequisite: Psychology 91 or equivalent.

Major Requirements: 24 semester hours in psychology including: Psychology 91, 119, 120; at least one course selected from Psychology 144, 145, and 148; at least one 200 level course.

Related Work: 18 semester hours of related work which usually includes courses in zoology and sociology or anthropology. Additional selected courses in chemistry, economics, education, mathematics, philosophy and physics which may meet the minor requirement must have the approval of the director of undergraduate studies.

RELIGION

PROFESSOR MYERS, CHAIRMAN; ASSISTANT PROFESSOR PERRY, DIRECTOR OF UNDERGRADUATE STUDIES AND SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSOR CRUM;
ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY,
PRICE, SALES AND WETHINGTON; MR. DANIELS

The uniform course requirements in Religion may be fulfilled by completing six semester hours in any of the following courses: 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

Specific prerequisites are indicated in the descriptions of some courses. Where prerequisites are stated in terms of Bible hours, any one of the following will satisfy a 3 semester hour prerequisite and any two, a 6 semester hour prerequisite: 1, 2, 51, 52, 101, 103, 104, 114.

1. **THE ENGLISH BIBLE.**—A survey of the contents of the Old Testament books in the light of their origin in the history and religion of the Hebrew people. 3 s.h. (E & W) PROFESSOR CRUM; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY, PRICE, SALES, AND WETHINGTON; MR. DANIELS

2. THE ENGLISH BIBLE.—A study of the personalities and literature of the New Testament against their Jewish, Hellenistic and Roman background. Although Religion 1 is not a prerequisite, it will be an aid to the student to complete 1 before taking 2. 3 s.h. (E & W)

PROFESSORS CRUM AND MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY, PRICE, SALES AND WETHINGTON; MR. DANIELS

51. THE ENGLISH BIBLE.—An introductory course in the Old Testament for sophomores and juniors. (See description of Religion 1.) Students may not receive credit for both 51 and 1. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PRICE, SALES AND WETHINGTON; MR. DANIELS

52. THE ENGLISH BIBLE.—A survey course in New Testament life and literature for sophomores and juniors. (See description of Religion 2.) It will be to the advantage of the students to take Religion 1 or 51 before taking 52. Students may not receive credit for both 52 and 2. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PRICE, SALES, AND WETHINGTON; MR. DANIELS

91. AN INTRODUCTION TO CHRISTIAN ETHICS.—A study of the theistic interpretation of man's moral experience, based upon the world-view of the Bible, as contrasted with other classical and contemporary moral philosophies. 3 s.h. (W)

ASSISTANT PROFESSOR PRICE

93. SURVEY OF THE WORLD'S GREAT RELIGIONS.—An introductory course designed to acquaint the student with the problems and methods of the historical study of religion. After a brief study of religion in primitive culture the world's living religions are dealt with in terms of the historical development and the beliefs, practices and contemporary significance of each. Prerequisite: 3 semester hours of Bible. 3 s.h. (E)

ASSISTANT PROFESSOR BRADLEY

94. THE BEGINNINGS OF THE CHRISTIAN CHURCH.—A study of the development of Christianity in the first two hundred years. Special emphasis will be given to the work of Paul, the later New Testament writings, the *Apostolic Fathers* and the early Apologists. Prerequisite: Religion 2 or 52. 3 s.h. (W)

ASSISTANT PROFESSOR SALES

101. THE SOCIAL TEACHINGS OF THE PROPHETS AND JESUS.—A study of the social teachings of the Old Testament prophets and of the social ideas of Jesus as they appear in the four gospels. Not open for credit to students who take Religion 103 or 114. Either semester. 3 s.h. (W)

ASSOCIATE PROFESSOR PHILLIPS

103. THE PROPHETS OF THE OLD TESTAMENT.—In this course a study is made of the history and nature of prophecy, with particular attention being given to the messages of the outstanding pre-exilic literary prophets. Students may not receive credit for both 103 and 107 or 103 and 101. 3 s.h. (E & W)

PROFESSORS MYERS; ASSISTANT PROFESSOR PERRY

104. JUDAISM FROM THE EXILE TO THE FALL OF JERUSALEM IN 135 A.D.—A study of post-exilic Judaism: the prophetic and apocalyptic developments of normative Judaism. 3 s.h. (W)

ASSISTANT PROFESSOR SALES

107. THE GREAT PROPHETS OF ISRAEL.—Special consideration will be given to the times and messages of Amos, Hosea, Isaiah, Jeremiah and Ezekiel. An effort will be made to appraise their contributions to literature, ethics, and faith. Some attention will be given to the relevance of prophetic religion for the present. Prerequisites: Religion 1, 2 or 51, 52 or equivalent. Students may not receive credit for both 103 and 107. 3 s.h.

PROFESSORS MYERS

114. THE LIFE AND TEACHINGS OF JESUS.—This course considers the period in which Jesus lived, the record of his life, and the meaning of teachings as recorded in the Synoptic Gospels. Students may not receive credit for 114 and 101; or 114 and 116. 3 s.h. (E & W)

PROFESSOR MYERS; ASSISTANT PROFESSORS BRADLEY AND PRICE

116. **THE MISSION AND MESSAGE OF JESUS.**—An intensive study analyzing and interpreting the Gospel records of Jesus' career, with emphasis upon their significance for the Christian religion. Students will be expected to select and make reports on particular projects. Prerequisites: Religion 1, 2 or 51, 52 or equivalent. Students may not receive credit for both 114 and 116. 3 s.h. (w)

PROFESSOR MYERS; ASSISTANT PROFESSOR PRICE

130. **CHRISTIAN ETHICS IN HISTORY AND MODERN LIFE.**—A study of the meaning of the Christian way, as formulated in the New Testament, historically interpreted by the Church and applied to modern society. Prerequisite: 3 s.h. in Bible. Students may not receive credit for both 130 and 132. 3 s.h. (w)

ASSISTANT PROFESSOR WETHINGTON

132. **THE CHRISTIAN AND CONTEMPORARY SOCIAL PROBLEMS.**—A study of the relevance which Christianity has to such topics as science, marriage, the state, war, politico-economic ideas and practices, communism, and the race problem. The aim of the course will be to encourage personal evaluation and interpretation, using pertinent biblical teachings and the views of prominent contemporary writers as a basis for judgment. Prerequisite: 3 semester hours of Bible. Students may not receive credit for both 132 and 130. 3 s.h. (w)

ASSOCIATE PROFESSOR PHILLIPS

134. **CONTEMPORARY RELIGIONS IN THE UNITED STATES.**—A study of Judaism, Catholicism and Protestantism with reference to each faith's distinctive beliefs and practices; and a comparison of common and dissimilar features. 3 s.h. (w)

ASSOCIATE PROFESSOR PHILLIPS

169. **CHARACTER PROBLEMS.**—The psychology of adolescence and the problems of youth in character building, with attention to the character education agencies in local communities. 3 s.h. (E & w)

PROFESSOR CRUM

170. **RELIGION AND THE FAMILY.**—A study of marriage and American home life with emphasis upon ethical and religious aspects. Not open to students who take Sociology 250. 3 s.h. (E & w)

PROFESSOR CRUM

171. **INTRODUCTION TO THE PSYCHOLOGY OF RELIGION.**—A study of the genesis and growth of religious experience, with special emphasis upon the experiences of youth. 3 s.h.

181. **THE NATURE AND EARLY DEVELOPMENT OF RELIGION.**—Introduction to the early history of religion, the beliefs and practices of the more primitive peoples, and the religious life of the ancient world. 3 s.h. (w)

ASSISTANT PROFESSOR WETHINGTON

182. **RELIGION IN THE CULTURE OF THE EAST AND WEST.**—A comparative study of the meaning and role of religion in Eastern and Western cultures with particular emphasis upon the contemporary influence of the sacred literature of Hinduism, Buddhism, Confucianism, Judaism, Islam and Christianity. Prerequisite: 3 semester hours of Bible. 3 s.h. (w)

ASSISTANT PROFESSOR PERRY

185. **THE NEGRO IN THE RELIGIOUS LIFE OF AMERICA.**—An examination of the ways in which the Christian Church has attempted to apply the Christian ethic to race relations with attention to the ethical aspects of these relations in American life and culture. 3 s.h.

PROFESSOR CRUM

192. **CHRISTIAN BELIEFS.**—An introductory study of the nature, significance and contemporary relevance of some of the important Christian beliefs. Prerequisite: 3 semester hours of Bible. 3 s.h. (E)

ASSISTANT PROFESSOR BRADLEY

197. **THE BIBLICAL INTERPRETATION OF HISTORY.**—Based upon materials in both the Old and New Testaments, consideration is given to the view of time and eternity, to the way in which God discloses His purpose for human life and participates in human affairs, and to the divine plan for the fulfillment of history. Prerequisite: 6 semester hours of Bible. 3 s.h. (w)

ASSISTANT PROFESSOR PERRY

The following courses offered in the Divinity School may be taken by undergraduates:

103 (DS)-104 (DS). **HELLENISTIC GREEK.**—Designed for beginners to enable them to read the Greek of the New Testament. 6 s.h. Mr. EDWARDS

201 (DS)-202 (DS). **FIRST HEBREW.**—The principles and structure of the Hebrew language with translation of selected Old Testament narratives. 6 s.h. PROFESSOR STINESPRING

207 (DS)-208 (DS). **SECOND HEBREW.**—Samuel or Kings the first semester and Isaiah the second. 6 s.h. ASSISTANT PROFESSOR BROWNLEE

DEPARTMENTAL MAJOR

Prerequisite: Religion 1-2 or 51-52.

Major Requirements: A major in the Department of Religion consists of 18 semester hours of work, exclusive of the introductory course, selected with the approval of the instructor under whose supervision the student does his major work. Six of the 18 semester hours must be in courses with biblical content.

Related Work: This is usually twenty-four semester hours, in courses that relate to the educational needs of the student. In general, it includes six semester hours in philosophy, psychology, and sociology. Other courses may be chosen from the offerings in art, education, English literature, health education, Greek, history, Latin and political science.

ROMANCE LANGUAGES

PROFESSOR JORDAN, CHAIRMAN; ASSOCIATE PROFESSOR DOW, DIRECTOR OF UNDERGRADUATE STUDIES IN FRENCH; PROFESSOR DAVIS, DIRECTOR OF UNDERGRADUATE STUDIES IN SPANISH; ASSISTANT PROFESSOR CORDLE, SUPERVISOR OF FRESHMAN STUDIES IN FRENCH; ASSISTANT PROFESSOR FEIN, SUPERVISOR OF FRESHMAN STUDIES IN SPANISH; PROFESSORS KENISTON (VISITING LECTURER), PREDMORE, AND WALTON; ASSOCIATE PROFESSORS ARCHIE AND CASTELLANO; ASSISTANT PROFESSORS DEMOREST AND TORRE; DRs. GRANT AND MULDRON; MISS CAMPBELL, MRS. CASTELLANO, MRS. DOW, MR. PRATT; MRS. BRYAN, MRS. DISMUKES, MESSRS. RUBIO AND THOMPSON

French 51-52 and Spanish 65-66 are the prerequisites for all elective courses. Some preparation in courses of the 100 level is prerequisite to election of courses above 200, except by special authorization of the department.

Students who, by reason of foreign residence, have had special opportunities in French or Spanish must be classified by the Director of Undergraduate Studies.

FRENCH

1-2. **ELEMENTARY FRENCH.**—Essentials of grammar, reading of appropriate material, drill in the spoken language. 6 s.h. (w & e) DR. GRANT AND STAFF

3-4. **INTERMEDIATE FRENCH.**—Readings in standard literary texts, review of verbs and syntax, oral exercises based on the reading texts. Prerequisite: French 1 and 2 or two years of high-school French. 6 s.h. (w & e) ASSOCIATE PROFESSOR DOW AND STAFF

51-52. **INTRODUCTION TO FRENCH LITERATURE.**—Reading of representative modern and contemporary literary texts. Study of the language with stress on the achievement of oral comprehension and ability to read. Prerequisite: French 3-4 or equivalent. 6 s.h. (w & e) PROFESSOR WALTON AND STAFF

55. **INTERMEDIATE CONVERSATION.**—To be taken concurrently with French 51, except by departmental permission. Enrollment limited to 10 students per section. Recommended for prospective French majors. Mrs. Dow

56. **INTERMEDIATE CONVERSATION.**—Prerequisite: French 55. To be taken concurrently with French 52. 1 s.h. (e) Mrs. Dow

108. THE FRENCH ROMANTIC MOVEMENT.—The impact of the modern world on the French thinkers and great poets of the early nineteenth century. Readings from Rousseau; the eyewitness testimony of Chateaubriand; the lyric poetry of Lamartine, Vigny, Musset, and Hugo. 3 s.h. DR. GRANT

111. FRENCH DRAMA OF THE NINETEENTH CENTURY.—A survey of the French theater from the romantic period to the *Théâtre libre*. 3 s.h. (E)
ASSOCIATE PROFESSOR DOW

112. FRENCH DRAMA OF THE TWENTIETH CENTURY.—Reading of representative plays selected from the works of Bernstein, Maeterlinck, Romains, Sarmont, Vildrac, J.-J. Bernard, Claudel, Lenormand, Pagnol, Giraudoux, and Anouilh. 3 s.h. (E)
ASSOCIATE PROFESSOR DOW

125. LIBERAL THINKERS OF THE EIGHTEENTH CENTURY.—Selected works of such authors as Diderot, Montesquieu, Rousseau, and Voltaire will be studied from the point of view of their impact upon the social and political thinking for the day. 3 s.h. (w)
ASSOCIATE PROFESSOR ARCHIE

127-128. ADVANCED COMPOSITION AND CONVERSATION.—During the first semester elements of syntax are briefly reviewed, along with constant drill in the conversational idiom. In the second semester, there are exercises in free composition, with intensified treatment of pronunciation and diction. 6 s.h. (E)
MRS. DOW

134. CONTEMPORARY FRENCH LIFE AND THOUGHT.—An introduction to the essential currents in French thought since 1885. Representative literary works are used as a basis for analysis and discussion of the contemporary scene. 3 s.h. (w)
ASSISTANT PROFESSOR CORDLE

210. THE AGE OF RICHELIEU.—An introduction to French life and thought in the literature of the early seventeenth century. The transition from the Renaissance to classical culture. Discussions of the baroque, the *Libertins*, the scientific rationalists, the Counter Reformation. Extensive reading in Corneille and Pascal. Lectures in French. 3 s.h. (E)
ASSISTANT PROFESSOR DEMOREST

213. FRENCH CLASSICISM.—Its initial phase. Readings from Malherbe, Molière, Racine, Boileau, La Fontaine, La Rochefoucauld, Madame de Sévigné, La Bruyère, and others. 3 s.h. (E)
PROFESSOR WALTON

214. FRENCH CLASSICISM.—Its final phase. Readings from Fontenelle, Saint-Simon, Abbé Prévost, Marivaux, Lesage, Montesquieu, Voltaire, and others. 3 s.h.
PROFESSOR WALTON

215, 216. THE MODERN FRENCH NOVEL.—A survey of the novel form from the seventeenth to the twentieth century, with particular attention to the analysis of fundamental literary tendencies; classicism, rationalism, romanticism, and realism. 6 s.h. (E)
PROFESSOR JORDAN

225. POLITICAL AND RELIGIOUS LITERATURE IN THE ROMANTIC PERIOD.—The Romantic outlook as it shapes political and religious literature from the Consulate to the Revolution of 1848. The mystics of conservatism, the prophets of a Romantic faith, and the heralds of a social republic. Lectures in French. 3 s.h.
ASSISTANT PROFESSOR DEMOREST

227. FRENCH POETRY SINCE THÉOPHILE GAUTIER.—Readings from the principal figures of the Parnassian and Symbolist movements, including Baudelaire, Leconte de Lisle, Heredia, Verlaine, Rimbaud, Mallarmé, Régner. 3 s.h. (E)
PROFESSOR WALTON

238. ANATOLE FRANCE.—Analysis of the principal phases of his work and its relation to the French tradition. Reading of his poetry, *Le Crime de Sylvestre Bonnard*, *Thaïs*, *Le Jardin d'Epicure*, *Les Dieux ont soif*, *Le Lys Rouge*, *L'Île des Pingouins*, part of *La Vie Littéraire*. 3 s.h. (E)
PROFESSOR WALTON

SPANISH

1-2. ELEMENTARY SPANISH.—Essentials of grammar, reading of appropriate materials, drill in the spoken language. 6 s.h. (w & E)

ASSISTANT PROFESSOR FEIN AND STAFF

3-4. INTERMEDIATE SPANISH.—Readings in standard literary texts, review of verbs and syntax, oral exercises based on the reading texts. Prerequisite: Spanish 1 and 2 or two years of high-school Spanish. 6 s.h. (W & E)

PROFESSOR PREDMORE AND STAFF

65-66. INTRODUCTION TO SPANISH LITERATURE.—Reading of representative modern and contemporary literary texts. Study of the language with stress on the achievement of oral comprehension and ability to read. Prerequisite: Spanish 3-4 or equivalent. 6 s.h. (W & E)

ASSOCIATE PROFESSOR CASTELLANO AND STAFF

68. INTRODUCTION TO SPANISH-AMERICAN LITERATURE.—Reading of selected modern novels typical of Spanish-American life, culture, and thought. This course is offered sometimes as an alternate to Spanish 66 and is accepted in fulfillment of major and graduation requirements. 3 s.h. (W & E)

ASSOCIATE PROFESSOR CASTELLANO AND STAFF

71. INTERMEDIATE CONVERSATION.—To be taken concurrently with Spanish 65, except by departmental permission. Enrollment limited to 10 students per section. Recommended for prospective Spanish majors. 1 s.h. (E)

MRS. CASTELLANO

72. INTERMEDIATE CONVERSATION.—Prerequisite: Spanish 71. To be taken concurrently with Spanish 66 or 68. 1 s.h. (E)

MRS. CASTELLANO

155. REPRESENTATIVE WRITERS OF SPANISH AMERICAN LITERATURE.—Reading and discussion of major works which illustrate literary trends from the early Colonial period to 1880. 3 s.h. (E)

ASSISTANT PROFESSOR FEIN

156. REPRESENTATIVE WRITERS OF SPANISH AMERICAN LITERATURE.—Study of works which are examples of the principal literary currents after 1880, with particular reference to their relationship to social ideas and problems in the same period. 3 s.h. (E)

ASSISTANT PROFESSOR FEIN

161. SPANISH LITERATURE: OLDER PERIOD.—Reading and interpretation of representative Spanish writers from the beginnings through the Golden Age. 3 s.h. (E)

PROFESSOR DAVIS

162. SPANISH LITERATURE: MODERN PERIOD.—Reading and interpretation of representative writers from Romanticism to the present. 3 s.h. (E)

ASSISTANT PROFESSOR TORRE

173. ADVANCED CONVERSATION.—One hour a week will be devoted to a review of the elements of syntax. The remainder of the course aims to develop facility of expression through constant drill on vocabulary and conversational idiom. Prerequisite: Spanish 66 (or 68) and 71-72, or permission. 3 s.h. (E)

ASSOCIATE PROFESSOR CASTELLANO

174. PHONETICS AND DICTION.—This course is intended to round out the students' oral experience, with emphasis on accurate pronunciation. Use is made of phonographic demonstrations and corrective exercises, with individual recordings. Prerequisite: Spanish 173, or permission. 3 s.h. (E)

ASSOCIATE PROFESSOR CASTELLANO

230-231. THE STORY OF THE SPANISH LANGUAGE.—How the sounds, forms, words, and sentence structure have changed from the speech of the Roman conquerors to the language which is spoken today in Spain and Spanish America. 6 s.h.

PROFESSOR KENISTON

257. OLD SPANISH LANGUAGE.—The historical development of the language together with illustrative readings. 3 s.h. (E)

PROFESSOR DAVIS

258. OLD SPANISH LITERATURE.—The literature of the Middle Ages and the early Renaissance. 3 s.h. (E)

PROFESSOR DAVIS

260. ADVANCED COMPOSITION AND SYNTAX.—Study of fundamental difficulties in the language; practice in writing idiomatic Spanish; exercises in free composition. For students who have a satisfactory command of Spanish grammar and fair conversational ability. Prerequisites: Spanish 173-174, or permission. 3 s.h. (E)

ASSOCIATE PROFESSOR CASTELLANO

261. NINETEENTH CENTURY NOVEL.—A study of literary and social trends in the last half of the nineteenth century. Readings will be selected from the novels of Valera, Pereda, Galdós, Pardo-Bazán, Blasco Ibáñez, and their contemporaries. 3 s.h. (E) PROFESSOR DAVIS

264. MODERN AND CONTEMPORARY SPANISH THEATRE.—A brief review of the modern and contemporary Spanish theatre from the period of Romanticism. Lectures, reading, and discussion of the most representative works of Benavente, Martínez Sierra, los hermanos Quintero, etc. 3 s.h. (E) ASSOCIATE PROFESSOR CASTELLANO

265. GOLDEN AGE LITERATURE: CERVANTES.—The life and thought of Cervantes with special emphasis on his *Quijote*. 3 s.h. (E) PROFESSOR PREDMORE

266. GOLDEN AGE LITERATURE: THE DRAMA.—Study of the chief Spanish dramatists of the seventeenth century with readings of representative plays of this period. 3 s.h. (E) ASSOCIATE PROFESSOR CASTELLANO

270. THE SPANISH LANGUAGE IN AMERICA.—Development of the Spanish language from the time of the Discovery to the present. 3 s.h. PROFESSOR PREDMORE

275. CONTEMPORARY SPANISH LITERATURE. ESSAY AND LYRIC POETRY.—A study of the revision of national values and literary expression in the twentieth century with particular reference to the crisis of 1898 and to the enrichment of the Spanish tradition through extrapeninsular influences. 3 s.h. (E) PROFESSOR PREDMORE

276. CONTEMPORARY SPANISH LITERATURE: NOVEL.—A study of tradition and innovation in the twentieth century Spanish novel and emphasis on the novels of Unamuno, Baroja, Valle Inclán, and Pérez de Ayala. 3 s.h. (E) PROFESSOR PREDMORE

285. THE EARLY RENAISSANCE IN SPAIN (1474-1550).—The major aspects are: humanism, reformation and counter-reform, the beginnings of the theater, the Italianate pots, the impact of the New World, architecture and the arts. 3 s.h. (E) PROFESSOR KENISTON

286. THE LATER RENAISSANCE IN SPAIN (1550-1600).—The novel—chivalric, pastoral, picaresque—, the emergence of the *comedia*, the ballads, the mystics, lyric poets, literary theory, architecture and the arts. 3 s.h. (E) PROFESSOR KENISTON

THE TEACHING OF ROMANCE LANGUAGES

RL 118. THE TEACHING OF ROMANCE LANGUAGES.—Evaluation of objectives and methods; a study of the practical problems involved in the teaching of reading, writing, hearing, and speaking; analysis of text books, special foreign language programs, teaching aids, and testing techniques. 3 s.h. (E)

ASSOCIATE PROFESSOR DOW

DEPARTMENTAL MAJOR

Prerequisites:

For French: French 51-52 (combined with 55-56), or equivalent.

For Spanish: Spanish 65-66 (combined with 71-72), or equivalent.

Major Requirements:

For French: Eighteen semester hours of work must be completed in courses numbered above 100 and must include: (a) six semester hours in course 127-128; (b) six semester hours of literature in courses 210 to 238.

For Spanish: Eighteen semester hours of work must be completed in courses numbered above 100 and must include: (a) six semester hours of linguistic training (courses 173-174, 260); (b) six semester hours of literature in the courses numbered above 200.

RELATED WORK

Majors in Romance Languages will normally take the prescribed amount of related work in the following fields: (1) other foreign languages and literature; (2) aesthetics; (3) history and appreciation courses in music and art; (4) philosophy; (5) general psychology; (6) history; (7) general sociology and anthropology.

Majors in Spanish may take a maximum of six hours of Spanish American political science or economics if taken with or after Spanish 155-156.

RUSSIAN

ASSISTANT PROFESSOR WINNER

51-52. INTRODUCTION TO THE RUSSIAN LANGUAGE.—Open to freshmen with the approval of the Dean. 6 s.h. (w) ASSISTANT PROFESSOR WINNER

53-54. INTERMEDIATE RUSSIAN LANGUAGE.—Prerequisite: Russian 51-52 or equivalent. 6 s.h. (E) ASSISTANT PROFESSOR WINNER

63-64. INTRODUCTION TO SCIENTIFIC AND MEDICAL RUSSIAN.—Introduction to the Russian language as used in the various contemporary sciences. Prerequisite: Russian 51-52 or equivalent. 6 s.h. (w) ASSISTANT PROFESSOR WINNER
[Not offered in 1954-55]

101-102. RUSSIAN CULTURE AND LITERATURE THROUGH THE NINETEENTH CENTURY.—After a brief survey from earliest times through eighteenth-century classicism, enlightenment, and sentimentalism, attention is focused on the literature of the nineteenth century, and the development of romanticism and of the realist school. Special attention is given to the works of Pushkin, Lermontov, Gogol, Goncharov, Turgenev, Tolstoi, Dostoevski, and Gorki. Readings are assigned in English translation. 6 s.h. (w) ASSISTANT PROFESSOR WINNER

103. AN INTRODUCTION TO SOVIET LITERATURE AND CULTURE.—An analysis of the development of Russian literature and culture since the Bolshevik revolution and the effect of Soviet policy on the literary production of the time. A survey of the important literary currents from Gorki and Mayakovski through Sholokhov. Lectures and class discussion. Readings will be assigned in English translation. 3 s.h. (E) ASSISTANT PROFESSOR WINNER
[Not offered in 1954-55]

105. HISTORY OF THE RUSSIAN THEATRE AND DRAMA.—A discussion of the most significant stages of Russian dramatic art from the earliest primitive harvest ceremonies to the development of theatrical realism and naturalism in the end of the nineteenth century and the development of the dramatic arts in the Soviet Union is combined with a study of the development of the Russian theatre, with special emphasis on such figures as Stanislavski, Meierholdt, Vakhtangov, etc. Class discussion and visual demonstrations. Reading are assigned in English translation. 3 s.h. (E) ASSISTANT PROFESSOR WINNER

112. PUSHKIN AND THE BIRTH OF RUSSIAN REALISM.—A study of Pushkin and his contemporaries from the point of view of their relationship to the development of the Russian romantic movement and to the emergence of an independent Russian realistic approach to literature. An analysis of the influence of Western literary figures, particularly Byron, on the development of Russian letters of the early nineteenth century. Readings are assigned in English translation. Prerequisite: Russian 101 or consent of the instructor. 3 s.h. (E) ASSISTANT PROFESSOR WINNER

SOCIOLOGY AND ANTHROPOLOGY

PROFESSOR JENSEN, CHAIRMAN; ASSOCIATE PROFESSOR SCHETTLE, DIRECTOR OF UNDERGRADUATE STUDIES, AND SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS HART AND THOMPSON; ASSOCIATE PROFESSOR LABARRE; ASSISTANT PROFESSORS WHITRIDGE AND ROY; DR. BANKS AND MR. MCNURLEN

91-92. GENERAL SOCIOLOGY.—An introduction to the scientific study of social life; its origin, evolution and organization as illustrated in the study of a number of concrete social problems. 6 s.h. (E & W)

PROFESSOR JENSEN; ASSOCIATE PROFESSOR SCHETTLE; ASSISTANT PROFESSORS ROY AND WHITRIDGE; MR. MCNURLEN

101. GENERAL SOCIOLOGY.—A more intensive version of course 91-92, which enables the student to complete the introductory course in sociology in one semester. 5 s.h. (w) ASSISTANT PROFESSOR ROY

I. ANTHROPOLOGY

93. GENERAL ANTHROPOLOGY.—Origins and distribution of the races of mankind; a survey of human palaeontology and human biology, world archaeology, prehistory and languages; and the origins of the family, primitive economics, arts, social and political organization. Special attention is given to primitive peoples. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

94. CULTURAL ANTHROPOLOGY.—A study of the dynamics of culture, the causal factors, functions, integration and disintegration, diffusion, growth and change of cultures. Emphasis is upon the simpler societies. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

212. PRIMITIVE RELIGION.—The ethnography, the social functions and the socio-psychological meanings of religion in primitive societies. Prerequisite: course 91-92, or 101, or 93 or 94. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

213. PERSONALITY AND SOCIETY.—The sociology and social psychology of human personality, its origins in the primary group, its nature and varieties, and its integrations into secondary group institutions, with emphasis upon the normal personality and its adjustments in our society and to our culture. Prerequisite: course 91-92, or 101, or 93 or 94. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE
[Admission only by consultation with the instructor.]

214. PERSONALITY AND CULTURE.—The influence of culture patterns and social institutions on character structure, socialization of the individual and the dynamics of human personality. Comparative anthropological materials will be drawn upon. Prerequisite: course 213. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE
[Admission only by consultation with the instructor.]

215. THE AMERICAN INDIAN.—A comprehensive survey of the Indians of North and South America, including a study of origins and prehistory, archaeology, physical anthropology, languages, material culture, social and political organization, economics and religion, discussed in terms of the "culture area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

217. THE PEOPLES OF AFRICA, ASIA, AND OCEANIA.—A comprehensive survey of non-European peoples of the Old World, covering available prehistory, archaeology, racial affiliations, languages, material culture, social and political organization, economics and religion, discussed in terms of the "cultural area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE
[Not offered in 1954-55]

II. COMMUNITY, RACE AND CULTURE

(Courses 91-92, or 101, or 93, or 94 prerequisite for all courses.)

133. SOCIOLOGY OF THE SOUTH.—The developing regional organization of the world economy studied with especial reference to Southern life and problems. A survey of the composition and distribution of population, races and race relations; economic conditions underlying population, race factors and culture of the South. Primary emphasis is upon social change and its control. 3 s.h. (w) PROFESSOR THOMPSON

134. HUMAN ECOLOGY.—A study of the human community in its competitive and cooperative aspects. 3 s.h. (w) PROFESSOR THOMPSON
[Not offered in 1954-55]

136. HUMAN MIGRATION.—A study of mankind in motion, including a consideration of the nature of migration, types of migration and settlement, and problems of migratory contacts. 3 s.h. (w) PROFESSOR THOMPSON
[Not offered in 1954-55]

137. THE NEGRO IN AMERICA.—A study of the history and changing status of the Negro regarded as a symbol and protagonist of minority groups in America and elsewhere. 3 s.h. (w) PROFESSOR THOMPSON

233. **RURAL SOCIOLOGY.**—The sociology of the land; peasant and folk societies and cultures; patterns of rural settlement like the farm, the plantation, the ranch and others; rural personality types; the changing character of rural life; rural problems. 3 s.h. (w) PROFESSOR THOMPSON

235. **URBAN SOCIOLOGY.**—A study of the city and civilization, the newspaper, the social survey, the slum and housing, neighborhoods and natural areas, urban institutions, urban problems, and city planning. 3 s.h. (w) PROFESSOR THOMPSON

237. **COMMUNITY AND SOCIETY.**—This course seeks to provide a frame of reference for the analysis and ordering of facts pertaining to the diverse cultures of the world, the State, the world community, the Great Society, news, mass behavior, social problems, races and classes. 3 s.h. (w) PROFESSOR THOMPSON

238. **RACE AND CULTURE.**—A study of the nature of race and of the relationships and problems of race. 3 s.h. (w) PROFESSOR THOMPSON

III. COLLECTIVE BEHAVIOR

(Courses 91-92, or 101, or 93 or 94 prerequisite for all courses.)

142. **THE SOCIOLOGY OF DISCUSSION.**—A course designed to develop practical social skills in intellectual cooperation. In the light of sociological theory of intellectual conflict, competition and cooperation, practice will be provided in the group solution of problems through committees, conferences and forums, and in the discussion processes whereby cooperation can be substituted for social antagonism. Prerequisites: either Sociology 91, 101, or 111, or 112, and six hours to be compiled from history, political science, Economics 105 and 155, and Education 115 and 176. Enrollment limited to a maximum of 30. 3 s.h. (w) PROFESSOR HART

149. **INTRODUCTION TO CHILD WELFARE.**—A study of heredity and environment as factors in personality development: infant conservation; welfare responsibilities of the school, emphasizing the physical and mental well-being of the child, play, and compulsory and industrial education; child labor, diagnosis and treatment of delinquency; care of the dependent and neglected child; child-caring agencies, public and private; and a community program of child welfare. 3 s.h. (E) PROFESSOR JENSEN

243. **SOCIAL ATTITUDES AND COLLECTIVE BEHAVIOR.**—Study of attitudes as products of social interaction; organization of attitudes into personal behavior patterns; expression of social attitudes in social, political and industrial groups; social unrest and the behavior of crowds and mobs; analysis of social movements, strikes, revolutions, and other group organizations. 3 s.h. (w)

ASSOCIATE PROFESSOR SCHETTLER

246. **PUBLIC OPINION AND PROPAGANDA.**—Nature and development of public opinion; relation to attitude, biases, stereotypes and controversial issues; role of leaders, pressure groups and minority groups; use of radio, press, motion picture and graphic arts; propaganda and censorship; measurements of public opinion. 3 s.h. (w)

ASSOCIATE PROFESSOR SCHETTLER

250. **MARRIAGE AND THE FAMILY.**—An analysis of contemporary marriage and family experience with emphasis on its functions, problems, resources and values. Not open to students who have received credit for Religion 170. 3 s.h. (w)

PROFESSOR HART

IV. SOCIAL ORGANIZATION AND DISORGANIZATION

(Courses 91-92, or 101, or 93, or 94 prerequisite for all courses.)

153. **THE FIELDS OF SOCIAL WORK.**—A non-professional course, designed to acquaint the student with the types of problems existing in both rural and urban communities which can be dealt with in a remedial and preventive way; how they arise in the reciprocal interaction of personality and culture, what their efforts are in terms of personal and social disorganization, how communities are organized to deal with them, and social agencies which have been developed to deal with problems of each type, together with an evaluation of effectiveness of the techniques employed. 3 s.h. (E)

ASSISTANT PROFESSOR WHITTRIDGE

[Not offered in 1954-55]

157. SOCIAL CHANGE AND SOCIAL CONTROL.—Basic nature of inventions as related to ideological and material factors; role of the inventor, reformer, and non-conformist; mobility, diversification and individualism as by-products of social change; techniques of social control in the family, school, church, industry and government; social planning and leadership in a dynamic society. 3 s.h. (w)

ASSOCIATE PROFESSOR SCHETTLE

158. SOCIOLOGY OF THE PROFESSIONS AND OCCUPATIONS.—Analysis of the professional and occupational structure of the American economy; shifts and trends in occupations and professions for men, women and minority groups; social and economic characteristics of occupational and professional groups; factors in the selection of a profession or occupation; sources of information about occupations and professions; measurements of aptitudes, abilities and skills; employer-employee relationships. 3 s.h. (w)

ASSOCIATE PROFESSOR SCHETTLE

165. INTRODUCTION TO INDUSTRIAL SOCIOLOGY.—An analysis and appraisal of the various factors that affect human relations in industry. It will deal with the interpersonal and intergroup relationships within the individual industrial unit which determine its efficiency as an economic and social institution; the social relationships of workers with one another and with management; their influence upon productivity, the relations of the worker toward the job, labor turnover, absenteeism, etc., and the social conditions in the community, housing, family life; recreation, etc., as they affect the social relations within the industrial community. 3 s.h. (w)

ASSISTANT PROFESSOR ROY

166. INDUSTRY AND SOCIETY.—A study of industrial institutions in their interrelationships with other forms of social behavior in the broad cultural setting of western civilization. The emphasis in this course will be on an examination of the influence of changes in the technical and social organization of industry upon community organization, social stratification, social mobility, social interaction, and personality development. Attention will center upon analysis of specific social problems resulting from the impact of industrial change. 3 s.h. (w)

ASSISTANT PROFESSOR ROY

262. EDUCATION AND THE CULTURAL PROCESS.—A study of education (1) as carried on traditionally among preliterate and folk peoples, and (2) as it becomes a problem in racially and culturally complex societies like that of the United States. 3 s.h. (w)

PROFESSOR THOMPSON

[Not offered in 1954-55]

271. SOCIAL PATHOLOGY.—A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society; poverty, physical defectiveness, malnutrition, mental deficiency, mental disease, undirected leisure activities and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. 3 s.h. (E)

PROFESSOR JENSEN

273. SPECIAL PROBLEMS IN SOCIAL PATHOLOGY.—Research projects in social and personal disorganization, limited to advanced students with the approval of the instructor. 1 to 3 s.h. *each semester*. (w)

PROFESSOR JENSEN

276. CRIMINOLOGY.—A study of the original tendencies of man and the problem of socializing these tendencies; the relations of physical and mental defectiveness and untoward influence in the home and neighborhood to crime; the development of criminological theory and procedure, emphasizing penal and reform methods, and especially modern methods of social treatment and prevention of crime. 3 s.h. (E)

PROFESSOR JENSEN

277. JUVENILE DELINQUENCY.—An intensive study of current research findings as to the nature, causes, extent and distribution of juvenile delinquency; individual and institutional methods of treatment and prevention; diagnostic clinics, juvenile courts and probation, training schools, coordinating councils and preventive agencies. 3 s.h.

[Not offered in 1954-55]

V. SOCIAL THEORY

(Course 91-92, or 101, or 93 or 94 prerequisite for all courses.)

286. SOCIAL ETHICS.—A study of sociological fundamentals underlying ethics, including the controversy between materialistic and idealistic social thinkers, the nature of personalities and of social organization, the nature of social values, types of social interaction and their effects upon general social values, underlying principles and facts of social change, and the bearings of all these upon certain social problems. 3 s.h. (w) PROFESSOR HART

288. CONTEMPORARY PROBLEMS IN CULTURAL LAG.—An exploration of such sociological problems as social evolution, cultural lag, conflict, accommodation, leadership, and social reform, in relation to the crisis of civilization, precipitated by the development of the atomic bomb and by kindred discoveries and inventions. 3 s.h. (w) PROFESSOR HART

VI. METHODS OF SOCIAL RESEARCH

(Course 91-92, or 101, or 93 or 94 prerequisite for all courses.)

191. PRINCIPLES OF SOCIAL CASE INVESTIGATION.—A non-professional course designed to acquaint the student with the basic research techniques employed in the case study of the interrelationships of personality and culture in various fields of sociological and anthropological interest. 3 s.h. (E)

ASSISTANT PROFESSOR WHITRIDGE

193. BASIC STATISTICAL METHODS IN SOCIOLOGY.—The processes of definition, classification, measurement, tabulation, association, correlation, comparison of averages and of percentages, prediction, preparation and interpretation of tables and charts, as applied to and illustrated by sociological data. One lecture, one recitation and three laboratory hours. 3 s.h. (w) PROFESSOR HART

292. STATISTICAL TECHNIQUES IN SOCIOLOGY.—Intended for graduate students, and for undergraduates who are ready to undertake original statistical research projects. 3 s.h. (w) PROFESSOR HART

293. SPECIAL PROBLEMS IN SOCIAL STATISTICS.—Applications of statistical techniques to specific research topics. Limited to advanced students with permission of the instructor. 1 to 3 s.h. each semester. (w) PROFESSOR HART

DEPARTMENTAL MAJOR

Prerequisite: Sociology 91-92 or 101.

Major Requirements: Eighteen semester hours of work in the Department in addition to Sociology 91-92 or 101, including at least six semester hours in Senior-Graduate courses.

Related Work: A minimum of eighteen semester hours, at least twelve of which are normally chosen from two of the following fields: economics, education, history, political science and psychology. Additional courses in health and physical education, philosophy and religion may also be elected as related work when indicated by the educational requirements of the student and approved by the departmental adviser. But not more than six hours work in courses primarily open to Freshmen can be counted toward this requirement.

ZOOLOGY

PROFESSOR GRAY, CHAIRMAN; ASSOCIATE PROFESSOR ROBERTS, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR HUNTER, SUPERVISOR OF FRESHMAN INSTRUCTION;
PROFESSORS SCHMIDT-NIELSEN AND WILBUR; ASSOCIATE PROFESSOR BOOK-
HOUT; ASSISTANT PROFESSORS BAILEY, HORN AND NACE; DRS.
SANDEEN, STRASBURG, VERNBERG AND WARD; MR. ROBERTSON

1. ANIMAL BIOLOGY.—The principles of biology as applied to animals. 4 s.h. (w & E) ASSOCIATE PROFESSORS HUNTER AND ROBERTS AND STAFF

2. GENERAL ZOOLOGY.—A brief survey of the animal kingdom. Prerequisite: Zoology 1. 4 s.h. (w & e)
ASSOCIATE PROFESSORS BOOKHOUT AND
HUNTER AND STAFF

53. COMPARATIVE VERTEBRATE ANATOMY.—A study of the anatomy and evolution of the organ systems of vertebrates. Prerequisites: Zoology 1, 2. 4 s.h. (w)
ASSISTANT PROFESSOR HORN AND STAFF

71. HEREDITY AND EUGENICS.—Effects of environment and heredity upon the individual and populations; interpretation of human genetic histories. Prerequisite: one year of zoology. 3 s.h. (w)
DR. WARD

92. GENERAL EMBRYOLOGY.—A study of the fundamental principles of embryology as illustrated in the frog, chick and mammal. Prerequisite: Zoology 53. 4 s.h. (w)
ASSISTANT PROFESSOR NACE AND STAFF

109. EVOLUTION.—The facts and theories of organic evolution. Prerequisite: two years of zoology. 3 s.h. (w)
ASSISTANT PROFESSOR BAILEY

110. INTRODUCTION TO GENETICS.—The principles and practical applications of genetics as applied to animals. (Primarily for majors in zoology.) Prerequisite: two years of zoology or consent of instructor. 4 s.h. (w)
DR. WARD

120. ORNITHOLOGY.—Lectures, laboratory and field trips dealing with the classification, adaptations, and natural history of birds. Prerequisite: one year of zoology. Zoology 53 recommended. 4 s.h. (w)
ASSISTANT PROFESSOR BAILEY

151. PRINCIPLES OF PHYSIOLOGY.—An introductory survey of physiological functions. Prerequisites: At least a year of zoology and a year of chemistry. 4 s.h. (w)
PROFESSORS SCHMIDT-NIELSEN AND WILBUR

156. VERTEBRATE HISTOLOGY.—The microscopic structure of normal tissues and organs of the vertebrate body. Training will be given in the preparation of material for microscopic study. Prerequisite: Zoology 53. 4 s.h. (w)
ASSOCIATE PROFESSOR ROBERTS

161. ANIMAL PARASITES.—An introductory course dealing with biological principles involved in parasitism of animals including man. Prerequisite: one year of zoology. 4 s.h. (e)
ASSOCIATE PROFESSOR HUNTER

193. FUNDAMENTALS OF ZOOLOGY.—The principles involved in the study of structure, function, ecology, genetics, classification, and evolution of animals. An elementary course without laboratory designed for senior students. Not open to students who have had previous courses in zoology. 3 s.h. (w)
DR. VERNBERG

196. SEMINAR: CURRENT DEVELOPMENTS IN ZOOLOGY.—Prerequisites: Zoology 53 and 92. Open only to seniors. 2 s.h. (w)
STAFF

FOR SENIORS AND GRADUATES

204. ADVANCED PARASITOLOGY.—Lectures, readings, and laboratory work, dealing with practical and theoretical problems of classification, morphology and host relations of animal parasites. Offered in alternate years. Prerequisite: Zoology 161. 4 s.h. (e)
ASSOCIATE PROFESSOR HUNTER

219-220. SPECIAL PROBLEMS.—Senior majors who have had proper training may be permitted to carry on special work. Permission must be obtained from the Director of Undergraduate Studies and the instructor under whom the student wishes to work. Not more than 4 s.h. (w & e)
STAFF

222. ENTOMOLOGY.—A study of anatomy, physiology, embryology, and classification of insects. Offered in alternate years. Prerequisite: One year of zoology. 4 s.h. (w)
PROFESSOR GRAY

224. VERTEBRATE ZOOLOGY.—A study of life histories, adaptations, ecology and classification of vertebrate animals. Offered in alternate years. Prerequisite: Zoology 53. 4 s.h. (w)
PROFESSOR GRAY

229. ENDOCRINOLOGY.—The structure, physiology, and embryology of the endocrine glands. Lectures, reading assignments, reports and laboratory work. Prerequisites: Zoology 53, 92. 4 s.h. (w)

238. SYSTEMATIC ZOOLOGY.—The fundamental theory and practice involved in the collection, identification, and classification of animals. Offered in alternate years. Prerequisites: Zoology 1, 2. 4 s.h. (w) ASSISTANT PROFESSOR BAILEY

252. COMPARATIVE PHYSIOLOGY.—The physiological mechanisms of animals studied on a comparative basis. Prerequisite: Zoology 151 or equivalent. 4 s.h. (w) PROFESSOR SCHMIDT-NIELSEN

253. ADVANCED VERTEBRATE MORPHOLOGY.—Lectures, reports, and reading assignments in the comparative morphology of the vertebrates, with particular emphasis on theories concerning the interrelationships of vertebrates and the origin of certain vertebrate structures. Advanced laboratory study of structure in selected groups of vertebrates. Offered in alternate years. Prerequisites: Zoology 53, 92. 4 s.h. (w) ASSISTANT PROFESSOR HORN

271. CELLULAR PHYSIOLOGY.—The physiological processes of living matter approached through studies of cells and tissues. Prerequisites: two years of biology and at least one year of chemistry. 4 s.h. (w) PROFESSOR WILBUR

274. INVERTEBRATE ZOOLOGY.—A study of structure, functions, and habits of invertebrate animals under normal and experimental conditions. Field trips will be made to study, collect, and classify animals in their natural habitats. Offered in alternate years. Prerequisites: Zoology 1, 2. 4 s.h. (w) ASSOCIATE PROFESSOR BOOKHOUT

276. PROTOZOOLOGY.—The morphology, physiology, taxonomy, and culture of protozoa. Offered in alternate years. Prerequisites: Zoology 1, 2. 4 s.h. (w) ASSOCIATE PROFESSOR BOOKHOUT

278. INVERTEBRATE EMBRYOLOGY.—Lectures, readings and laboratory work dealing with rearing, life history and development of invertebrates. Offered in alternate years. Prerequisite: Zoology 92. 4 s.h. (w) ASSOCIATE PROFESSOR BOOKHOUT

For summer courses in Marine Biology consult the Bulletin of the Duke University Marine Laboratory.

RELATED COURSES, ONE OF WHICH MAY BE COUNTED TOWARD A
MAJOR IN ZOOLOGY

BOTANY 101. PRINCIPLES OF HEREDITY.—3 or 4 s.h. (w) ASSOCIATE PROFESSOR PERRY

BOTANY 202. GENETICS.—4 s.h. (w) ASSOCIATE PROFESSOR PERRY

DEPARTMENTAL MAJOR

Prerequisites: Zoology 1 and 2.

Major Requirements (for both A.B. and B.S. degrees): A minimum of 24 s.h. of zoology including courses 53, 92, 151 or 271.

Related Work: At least one year of chemistry; additional work usually chosen from courses in botany, chemistry, geology, mathematics and physics.

Language Requirements: For A.B. degree: Preferably German or French. For B.S. degree: Both German and French.

Courses of Instruction College of Engineering



CIVIL ENGINEERING

ASSOCIATE PROFESSOR WILLIAMS, ACTING CHAIRMAN; PROFESSOR HALL; ASSOCIATE PROFESSOR PALMER; ASSISTANT PROFESSORS GARDNER, HAINES AND LEWIS; MESSRS. ARGES, C. W. BROWN, W. G. BROWN, PIERRY, STOTTLEMYER AND THARP

61. PLANE SURVEYING.—Use of instruments; transit, stadia and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisites: G.E. 1 and Math 6. 4 s.h. (w) Mr. C. W. BROWN AND STAFF

62. ADVANCED SURVEYING.—Simple triangulation; topographic surveying using stadia and plane table; laying out and division of land; public land system; calculations; grading plans and quantities; determination of azimuth by H. O. 211. Prerequisite: C.E. 61. 4 s.h. (w) Mr. C. W. BROWN AND STAFF

108. ADVANCED STRENGTH OF MATERIALS.—Applications of Mohr's circle, deflections, and energy of strain to advanced problems. Prerequisite: G.E. 107. 3 s.h. (w) ASSOCIATE PROFESSOR WILLIAMS

[Offered only upon sufficient demand; enrollment limited.]

S110. PLANE SURVEYING.—The equivalent of C.E. 61 given especially for students in forestry. See *Bulletin of Summer Session*. 4 s.h. (w) Mr. THARP

113. ROUTE SURVEYING.—Thorough drill in the calculation and laying out of simple, compound, and easement curves, widening of curves; vertical curves; setting slope stakes; ordinary earthwork computations and mass diagrams. Prerequisite: C.E. 61. 3 s.h. (w) ASSOCIATE PROFESSOR WILLIAMS

116. HIGHWAY ENGINEERING.—Location, design, construction and maintenance of highways and city streets; soil stabilization; traffic studies; economics of planning and design. Prerequisites: C.E. 113, C.E. 135. 3 s.h. (w) ASSOCIATE PROFESSOR WILLIAMS

118. MATERIALS OF ENGINEERING.—Study and testing of materials commonly used in civil engineering. The content of course GE 109 and standard tests to determine significant physical properties of cementing materials and aggregates. The design and proportioning of concrete mixtures. Prerequisite: CE 107. 3 s.h. ASSOCIATE PROFESSOR WILLIAMS

121. HYDROLOGY.—Fundamentals of meteorology; precipitation; evaporation. Ground water development. Stream flow and stream gaging. Hydrograph analysis. Flood control. Field trips to be arranged. Prerequisite: G.E. 128. 3 s.h. (w) Mr. STOTTLEMEYER

[Offered only upon sufficient demand; enrollment limited.]

123. WATER SUPPLY AND SEWERAGE.—Statistical analysis of rainfall and run-off records; population estimation; analysis of the yield of watersheds and storage requirement; design of water distribution systems; design of sanitary and storm sewerage systems. Prerequisite: G.E. 128. 4 s.h. (w) Mr. STOTTLEMEYER

124. WATER PURIFICATION AND SEWAGE TREATMENT.—Chemical and bacteriological analysis of water and sewage effluents; design of water purification treatment systems; design of sewage treatment plans. Prerequisite: C.E. 123. 3 s.h. (w) Mr. W. G. BROWN

128. INDUSTRIAL WATER SUPPLIES.—Water quality for industrial uses. Analytical techniques and interpretation of results. Boiler feed water requirements; softening, ion exchange; deaeration, priming; foaming; corrosion; embrittlement. Control of treatment processes. Prerequisite: Chemistry 1-2. 3 s.h. (w) Mr. STOTTELMYER

[Offered only upon sufficient demand; enrollment limited.]

129-130. ELEMENTARY STRUCTURES.—Stresses in beams and trusses for fixed and moving loads. Deflection of beams and trusses. Design of tension, compression, and flexural members; connections; and plate girders. Design of reinforced concrete beams, slabs, columns, footings, and retaining walls. (For students not majoring in Structural Engineering.) Prerequisite: G.E. 107. 6 s.h. (w)

ASSOCIATE PROFESSOR PALMER

[Offered only upon sufficient demand; enrollment limited.]

131. STRUCTURES.—ANALYSIS AND ELEMENTARY DESIGN.—Stresses in roofs, parallel and inclined chord bridges, including sub-divided panels, by algebraic and graphic methods under all conditions of loading; shear and moments in frames and bents; influence lines: Williot diagram. Structural drafting, details in steel and timber; methods of fabrication and erection. Prerequisites: G.E. 57, 107. 5 s.h. (w)

ASSOCIATE PROFESSOR PALMER

132. STRUCTURES.—DESIGN.—Tension, compression, flexural members, end posts, eccentric connections, unsymmetrical bending; riveted and welded plate girders; trusses and office building frames; wind analysis. Design and detail drawings. Prerequisite: C.E. 131. 5 s.h. (w)

ASSOCIATE PROFESSOR PALMER

133. REINFORCED CONCRETE.—Theory and design of reinforced concrete beams, slabs, and columns including eccentric loads; footings; retaining walls. Prerequisite: G.E. 107. 4 s.h. (w)

ASSOCIATE PROFESSOR PALMER

135. SOIL MECHANICS.—Identification and classification; flow nets; frost action; stability of foundations, cuts and embankments, and retaining walls; settlement. Laboratory includes identification, permeability, shear, unconfined compression, consolidation and compaction tests. Prerequisite: G.E. 107. 3 s.h. (w)

ASSISTANT PROFESSOR GARDNER

137-138. SEMINAR.—Students are required to make reports and to talk on current engineering literature or on such other topics as may be assigned. 2 s.h. (w)

ASSOCIATE PROFESSOR WILLIAMS AND STAFF

[Offered only upon sufficient demand; enrollment limited.]

140. INDETERMINATE STRUCTURES.—Application of least work, slope deflection, moment distribution, and column analogy. Analytic, graphic, and experimental methods are used. Prerequisites: C.E. 131, C.E. 133. 3 s.h. (w)

ASSOCIATE PROFESSOR PALMER

142. HYDRAULIC ENGINEERING.—Static and dynamical principles of fluids applied to specific engineering problems. Effects of gravity, viscosity, compressibility, and surface tension on fluid motion in closed conduits and open channels; surface and form resistance; dimensional analysis and theory of models. Non-uniform flow in open channels. Hydraulic jump, backwater curves. Hydraulic problems of flood control, flood routing. Dam design. Prerequisite: C.E. 128 or M.E. 105. 3 s.h. (w)

ASSOCIATE PROFESSOR WILLIAMS

[Offered only upon sufficient demand; enrollment limited.]

143-144. PROJECTS IN CIVIL ENGINEERING.—This course may be assigned by the Chairman of the Department to certain seniors who have shown an aptitude for research in one distinct field of civil engineering, in which case it may be substituted for certain general civil engineering courses. 2-6 s.h. (w) STAFF

146. CIVIL ENGINEERING PROBLEMS.—Professional aspects of civil engineering practice. Selected problems in analysis and design, considerations of engineering economy, contracts, specifications, and ethics. Seniors only. 2-3 s.h.

ASSOCIATE PROFESSOR PALMER

ELECTRICAL ENGINEERING

PROFESSOR SEELEY, CHAIRMAN; ASSOCIATE PROFESSOR VAIL, EXECUTIVE OFFICER; ASSOCIATE PROFESSOR MEIER; ASSISTANT PROFESSORS EGERTON, KRAYBILL, AND OWEN; MESSRS. BOWERS AND THURSTONE

51. SURVEY OF ELECTRICAL ENGINEERING.—A course designed to give the student a general survey of the engineering profession, to define the scope of activities of the electrical engineer, and to provide an introduction to engineering problems. One two-hour computation. 1 s.h. (w) ASSISTANT PROFESSOR KRAYBILL

52. ELECTRIC AND MAGNETIC FIELDS.—An introductory course covering a mathematical and physical analysis of energy relations in electrostatic and magnetostatic fields; resistance, capacitance and inductance of systems of conductors; systems of electric and magnetic units. Two recitations and one two-hour computation. Prerequisites: E.E. 51, Mathematics 52. Physics 52, Mathematics 53 concurrently. 3 s.h. (w) ASSOCIATE PROFESSOR VAIL

101-102. CIRCUITS IN ELECTRICAL ENGINEERING.—A two-semester course covering methods of electric and magnetic circuit analysis applicable in all branches of electrical engineering; alternating and direct currents; the algebra of vectors and complex quantities; networks; nonsinusoidal waves; coupled circuits; transients; polyphase circuits; complex frequency. Prerequisite: E.E. 52. E.E. 107-108 and Mathematics 131 concurrently. 6 s.h. (w) ASSOCIATE PROFESSOR VAIL

105. ELECTRICAL MEASUREMENTS.—A course covering direct-current and low-frequency measurements; the theory, calibration, and use of laboratory standards and of apparatus for the measurement of potential, current, power, and energy; and audio-frequency determination of impedance. Three class sessions and one three-hour laboratory. Prerequisite: EE 52. Mathematics 131 and EE 101 concurrently. 4 s.h. ASSISTANT PROFESSOR OWEN AND MR. THURSTONE

106. ELECTRON TUBES AND CIRCUITS.—A course covering electronic emission, static and dynamic tube characteristics, rectification, glow-discharge tubes, amplifiers, oscillators, and other typical circuits. Three class sessions and one three-hour laboratory. Prerequisites: E.E. 101, E.E. 105, E.E. 107. E.E. 102 and E.E. 108 concurrently. 4 s.h. (w) ASSISTANT PROFESSOR OWEN AND MR. THURSTONE

107-108. CIRCUITS LABORATORY.—A two-semester course designed to provide instruction in electrical laboratory techniques and in the preparation of engineering reports, and to provide experimental verification of the theory of course 101-102, with which it should be taken concurrently. One three-hour laboratory. 2 s.h. (w) ASSOCIATE PROFESSOR VAIL AND MR. BOWERS

123. PRINCIPLES OF ELECTRIC CIRCUITS.—A course designed especially for students in other branches of engineering, covering fundamental electric units and both alternating and direct-current circuits. Three class sessions and one three-hour laboratory. Prerequisites: Mathematics 52 and Physics 52. 4 s.h. (w)

ASSISTANT PROFESSORS KRAYBILL AND EGERTON;
MESSRS. BOWERS AND THURSTONE

124. PRINCIPLES OF ELECTRIC MACHINERY.—A course designed especially for students in other branches of engineering, covering the application of the principles of course E.E. 123 to alternating and direct-current machinery and associated apparatus. Three class sessions and one three-hour laboratory. Prerequisite: E.E. 123. 4 s.h. (w) ASSISTANT PROFESSORS KRAYBILL AND EGERTON; MR. THURSTONE

148. DIRECT-CURRENT MACHINERY.—A study of the principles which underlie the design and operation of all types of direct-current generators, motors, and associated apparatus. Prerequisites: E.E. 101 and E.E. 107. E.E. 102 and E.E. 108 concurrently. 3 s.h. (w) ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

158. **ELECTRIC-POWER SYSTEMS.**—A course providing a brief survey of the electric-power industry followed by a consideration of the economic and engineering features of power plant location and design, and by a study of the apparatus utilized in the generation, transmission and distribution of electric power. Prerequisites: E.E. 148, M.E. 104, and permission of instructor. E.E. 257-258 concurrently. Elective for electrical majors. 3 s.h. (w) PROFESSOR SEELEY

[Offered only upon sufficient demand; enrollment limited.]

159. **TRANSMISSION.**—A development of the theory underlying the transmission of electric energy over conductors at both power and communication frequencies. Two class sessions and one two-hour computation. Prerequisites: E.E. 101-102, E.E. 105, E.E. 106, Mathematics 131. 3 s.h. (w) PROFESSOR SEELEY

161. **HIGH-VOLTAGE PHENOMENA.**—An introductory study of high-voltage phenomena and their engineering applications; behavior of gaps and insulators upon application of power-frequency and impulse voltages; corona; properties of insulating materials; high-voltage measurements; elements of high-voltage design. Two class sessions and one three-hour laboratory. Prerequisites: E.E. 101-102, E.E. 105, E.E. 106, and permission of instructor. Elective for electrical majors. 3 s.h. (w)

ASSOCIATE PROFESSOR VAIL

[Offered only upon sufficient demand; enrollment limited.]

163-164. **ELECTRIC MACHINERY LABORATORY.**—A study of the technique of testing electric machines and a thorough analysis of their performance. Concurrent with E.E. 257-258. One three-hour session, for two semesters. 2 s.h. (w)

ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

165-166. **ELECTRICAL ENGINEERING SEMINAR.**—A course in which seniors are required to present oral reports and dissertations on material appearing in current engineering literature. Juniors may participate, but without credit. 2 s.h. (w)

STAFF

171. **FUNDAMENTALS OF ILLUMINATION.**—A course designed to familiarize the student with some of the factors that influence seeing; to provide a working knowledge of lighting language, sources, and measuring techniques; and to acquaint the student with the basic factors involved in recommended lighting practice. Two class sessions and one two-hour computation. Prerequisites: E.E. 101-102 or E.E. 123, and permission of instructor. Elective. 3 s.h. (w) ASSISTANT PROFESSOR KRAYBILL

[Offered only upon sufficient demand; enrollment limited.]

173-174. **PROJECTS IN ELECTRICAL ENGINEERING.**—A course which may be undertaken only by seniors who show special aptitude, or who may have had previous experience directly related to the proposed project. The consent of the Chairman of the Department must be obtained before registering. Elective for electrical majors. 3-6 s.h. (w) STAFF

[Offered only upon sufficient demand; enrollment limited.]

180. **RADIO-FREQUENCY TRANSMISSION AND PROPAGATION.**—Theory and application of transmission and propagation at high and ultra-high frequencies; impedance-matching elements; coupling devices; cavity resonators; wave guides and antennas. Two class sessions and one three-hour laboratory. Prerequisites: E.E. 159, E.E. 261, and permission of instructor. E.E. 262 concurrently. Elective for electrical majors. 3 s.h. (w) ASSISTANT PROFESSOR OWEN

[Offered only upon sufficient demand; enrollment limited.]

197. **INDUSTRIAL APPLICATIONS OF ELECTRICAL EQUIPMENT.**—A course of lectures, demonstrations, and recitations designed especially for students in other branches of engineering, dealing with the basic principles of utilization of a wide variety of electrical equipment in industrial practice. Emphasis is on industrial control, motor and generator applications, and electronic devices and applications. Prerequisite: E.E. 124 and permission of instructor. Elective for non-electricals. 3 s.h. (w) ASSOCIATE PROFESSOR MEIER

[Offered only upon sufficient demand; enrollment limited.]

198. **INDUSTRIAL CONTROL.**—This course, open only to students majoring in electrical engineering, consists of a study of the electromagnetic and electronic control of electric motors in industrial applications. Prerequisites: E.E. 101-102, E.E. 106, E.E. 148, E.E. 257, and permission of the instructor. E.E. 258 concurrently. Elective for electrical majors. 3 s.h. (w) ASSOCIATE PROFESSOR MEIER
[Offered only upon sufficient demand; enrollment limited.]

257-258. **ALTERNATING-CURRENT MACHINERY.**—A two-semester course dealing with the theory underlying the design, construction, and operation of synchronous generators, transformers, polyphase induction motors, synchronous motors, single-phase motors of all types, and converters and rectifiers. Prerequisites: E.E. 101-102 and E.E. 148. 6 s.h. (w)
ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

261. **COMMUNICATION ENGINEERING.**—An advanced course dealing with the principles underlying radio communication with special emphasis on the development of methods and procedures for the mathematical analysis of electron tube circuits. Included are vacuum tube amplifiers, oscillators, special electron tube circuits, and introduction to pole and zero studies of response and impedance. Three class sessions and one three-hour laboratory. Prerequisites: E.E. 101-102, E.E. 105, E.E. 106, and Mathematics 131. 4 s.h. (w) ASSISTANT PROFESSOR OWEN

262. **COMMUNICATION ENGINEERING.**—The second half of the course E.E. 261. Included are rectifiers and filters, amplitude and frequency modulation, demodulation, microwave tubes, propagation of radio waves, antennas. Three class sessions and one three-hour laboratory. Prerequisite: E.E. 261. 4 s.h. (w)
ASSISTANT PROFESSOR OWEN

263-264. **OPERATIONAL CIRCUIT ANALYSIS.**—An advanced course covering the mathematical analysis of certain circuits used in electrical engineering, with an introduction to the application of operational calculus to circuit analysis. Prerequisites: E.E. 101-102, Mathematics 131, and permission of instructor. Elective for electrical majors. 6 s.h. (w) PROFESSOR SEELEY
[Offered only upon sufficient demand; enrollment limited.]

MECHANICAL ENGINEERING

ASSOCIATE PROFESSOR KENYON, ACTING CHAIRMAN; PROFESSOR R. S. WILBUR; ASSOCIATE PROFESSOR REED; ASSISTANT PROFESSORS ELSEVIER, FULTON, HOLLAND, AND L. C. WILBUR; MESSRS. MACCONOCHIE, RABIN AND SMITH

52. **KINETICS-MECHANISM.**—Motions of particles. Applications of Newton's *Laws of Motion* to motions of rigid bodies. Work, energy, impulse, and momentum. Linkage, cams, gears, trains of mechanism. Three recitations, three laboratory hours. Prerequisites: G.E. 2, G.E. 57, Mathematics 52. 4 s.h. (w)

ASSISTANT PROFESSORS FULTON, HOLLAND AND L. C. WILBUR; MR. MACCONOCHIE

53. **MATERIALS.**—Mechanical properties of materials; elementary metallurgy; heat treatment, properties and selection of iron, steel, copper, brass, aluminum, plastics, and other common materials. Lectures and recitations supplemented with films and demonstrations. Prerequisite: Chemistry 2. 3 s.h. (w)
ASSISTANT PROFESSOR L. C. WILBUR; MESSRS. MACCONOCHIE AND SMITH

57. **PROCESSES.**—Lectures and recitations covering casting, forging, welding, bending, rolling, drawing, machining, and other common processes. Interchangeable manufacture, metal fits, production methods. Supplemented with films and demonstrations. 2 s.h. (w) ASSISTANT PROFESSOR FULTON AND MR. MACCONOCHIE

101-102. **ENGINEERING THERMODYNAMICS.**—A study of thermodynamic properties and processes of gases, vapor and gas-vapor mixtures; cycles; efficiencies and performance of steam power plant equipment. Three recitations. Prerequisites: Mathematics 52, Physics 52, Chemistry 2. 6 s.h. (w)
PROFESSOR R. S. WILBUR

103-104. HEAT POWER ENGINEERING.—A short course in engineering thermodynamics with applications to power plant design, for C.E. and E.E. students only. Three recitations. Prerequisites: Chemistry 2, Mathematics 52, Physics 52. 6 s.h. (w)

ASSOCIATE PROFESSOR REED; ASSISTANT PROFESSORS
FULTON AND L. C. WILBUR

105. FLUID MECHANICS.—Fluid statics; kinematics of fluid flow; application of fluid dynamics theory to flow through orifices, weirs, and pipes; general principles of centrifugal pumps and turbines. Prerequisites: Mathematics 52, Physics 52. 3 s.h. (w)

ASSOCIATE PROFESSOR KENYON

106. HEAT TRANSFER.—Conduction, radiation and convection; heat transfer to boiling liquids or condensing vapors; over-all transfer of heat, steady state or variable flow. Applications to heat power, heating and air conditioning, and refrigeration. Prerequisites: M.E. 101 or 103, M.E. 105 or G.E. 128, M.E. 102 or 104 concurrently. May be elected by limited number of C.E. and E.E. students. 3 s.h. (w)

ASSOCIATE PROFESSOR REED

108. AERONAUTICS.—A general course applying fluid mechanics principles to airfoils, propellers, and the complete airplane. Prerequisite: M.E. 105. 3 s.h. (w)

ASSISTANT PROFESSOR ELSEVIER

113-114. JUNIOR MECHANICAL ENGINEERING LABORATORY.—Open only to mechanical engineering students. First semester, three laboratory hours, devoted to experiments and reports in hydraulics, flue gas analyses, calorific value of fuels. Second semester, six laboratory hours, devoted to experiments and reports related to thermodynamics, such as boiler inspection, air compression, injectors, steam and fuel calorimetry. M.E. 101-102 concurrently. 3 s.h. (w)

STAFF

115-116. JUNIOR MECHANICAL ENGINEERING LABORATORY.—Open only to electrical and civil engineering students. Experiments and reports on measuring instruments and apparatus, flow of air, steam and water, economy of boilers, steam and internal combustion engines. Three laboratory hours. M.E. 103-104 concurrently. 2 s.h. (w)

STAFF

150-151. MACHINE DESIGN.—Application of principles of mechanics, strength of materials, constructive processes and engineering drawing to the design of bolted, riveted and welded connections, pressure vessels and machine elements, followed by design of at least one complete machine. M.E. 150 has two recitations and three laboratory hours; M.E. 151 has two recitations and six laboratory hours. Prerequisites: G.E. 107, M.E. 52, M.E. 53, M.E. 57. 7 s.h. (w)

ASSISTANT PROFESSOR HOLLAND AND MR. MACCONOCHIE

153-154. HEATING, AIR CONDITIONING AND REFRIGERATION.—Determinations of heat losses and gains; design of steam, hot water and warm air heating and air conditioning systems; panel heating. Fundamentals of refrigeration theory and design. Applications of refrigeration to summer and year round air conditioning commercial and industrial applications of refrigeration. Prerequisite: M.E. 106. M.E. 159-160 concurrently. Two recitations, three laboratory hours. 6 s.h. (w)

ASSOCIATE PROFESSOR REED

155. INTERNAL COMBUSTION ENGINES.—Principal cycles; fuels and fuel mixtures; effect of real mixtures on theoretical cycles; combustion; carburetion and fuel injection. Thermodynamic analysis of engine performance. Modern developments in the internal combustion engine. Three recitations. Prerequisite: M.E. 101-102. 3 s.h. (w)

ASSISTANT PROFESSORS ELSEVIER AND FULTON

157. CENTRIFUGAL PUMPS AND BLOWERS.—A study of the basic principles of design, construction and application of centrifugal pumps and blowers. May be elected by a limited number of mechanical engineering seniors with consent of Chairman of Department. Prerequisite: M.E. 105. 3 s.h. (w)

ASSISTANT PROFESSOR FULTON

[Offered only upon sufficient demand; enrollment limited.]

158. INDUSTRIAL ENGINEERING.—A study of the industrial growth and present tendencies of productive industries as concerns the engineer. Specific topics treated are: plant location, organization, production and cost controls, wage payment, etc. *Seniors only*. Three recitations. 3 s.h. (w)

ASSOCIATE PROFESSOR KENYON AND MR. SMITH

159. SENIOR MECHANICAL ENGINEERING LABORATORY.—Tests and reports on performance and economy of internal combustion engines, steam engines and turbines; heat transfer, radiator tests, and energy balances. Required of all seniors in mechanical engineering. Six laboratory hours. Prerequisite: M.E. 114. M.E. 153 concurrently. 2 s.h. (w) STAFF

160. SENIOR MECHANICAL ENGINEERING LABORATORY.—Required of all seniors in mechanical engineering. Tests and reports on boiler, engine, turbine, condenser and accessories; heat transfer; refrigeration equipment. Six laboratory hours. Prerequisite: M.E. 159. M.E. 154 and M.E. 162 concurrently. 2 s.h. (w) STAFF

162. POWER PLANT CALCULATIONS.—Study of economic and engineering factors in developing steam power plants. Consideration of the performance of boilers, prime movers, condensers and various auxiliaries in various groupings as they affect the plant heat balance. May be elected by a limited number of C.E. or E.E. students. Three recitations. Prerequisite: M.E. 102 or 104. M.E. 160 concurrently. 3 s.h. (w) PROFESSOR R. S. WILBUR

164. ENGINEERING ANALYSIS.—A study of a series of engineering problems with particular reference to mathematical and graphical methods of solution and engineering interpretation of results. 3 s.h. (w)

ASSISTANT PROFESSOR L. C. WILBUR

[Offered only upon sufficient demand; enrollment limited.]

166. AIR-CONDITIONING DESIGN.—Analysis of air-conditioning requirements, summer and winter, commercial and industrial. Design of systems and units, and selection of equipment. Open to seniors who have completed M.E. 153. 3 s.h. (w)

ASSOCIATE PROFESSOR REED

[Offered only upon sufficient demand; enrollment limited.]

197-198. PROJECTS IN MECHANICAL ENGINEERING.—This course may be assigned by the Chairman of the Department to certain seniors who express a desire for such work and who have shown aptitude for research in one distinct field of mechanical engineering. Elective credit for either semester. 3-6 s.h. (w) STAFF

GENERAL ENGINEERING

STAFF

1. ENGINEERING DRAWING.—The study of mechanical drawing with emphasis on third angle projection, pictorial drawing, dimensioning, working drawings, pencil and ink techniques. 2 s.h. (w)

ASSISTANT PROFESSORS HAINES AND LEWIS

2. DESCRIPTIVE GEOMETRY.—A study of drawing board geometry with emphasis on line and plane problems, developments, and intersections. Further emphasis on drawing techniques. Prerequisite: G.E. 1. 2 s.h. (w)

ASSISTANT PROFESSORS HAINES AND LEWIS

57. STATICS.—Concurrent forces, parallel forces, nonconcurrent and nonparallel forces, centroids, friction, moment of inertia. Prerequisite: G.E. 1. Mathematics 52 concurrently. 3 s.h. (w) STAFF

58. DYNAMICS.—Translation, rotation, work, energy, and momentum. Prerequisites: G.E. 57 and Mathematics 52. 3 s.h. (w) ASSISTANT PROFESSOR GARDNER

107. STRENGTH OF MATERIALS.—Elastic bodies under stress; flexure of simple, overhanging, fixed, and continuous beams; columns; combined stresses, etc. For Civil Engineering students, the laboratory work is included in course C.E. 118. Other students should take course G.E. 109 for laboratory. Prerequisites: G.E. 57, Mathematics 52. 3 s.h. (w) ASSOCIATE PROFESSOR PALMER AND STAFF

109. STRENGTH OF MATERIALS LABORATORY.—Study and use of testing machines and strain gages. Tests to determine significant physical properties of the common engineering materials. Experimental verification of the elementary theory of structural members. Must be preceded or accompanied by G.E. 107. 1 s.h.
MR. ARGES

128. HYDRAULICS.—Elementary principles of hydromechanics. Application to engineering problems of hydrostatics and of the principles of energy, continuity, and momentum relating to flow. The effects of gravity and viscosity on fluid motion. Dimensional analysis and dynamic similarity; hydraulic measuring devices; steady flow in closed conduits and in open channels. Prerequisite: G.E. 58 or M.E. 52.
3 s.h.
ASSOCIATE PROFESSOR WILLIAMS

Student Life and Activities



CONDUCT AND DISCIPLINE: The University expects of its students loyal and hearty cooperation in developing and maintaining high standards of conduct as well as of scholarship. The University therefore reserves the right, and matriculation by the student is a concession of this right, to ask the withdrawal of any student whose conduct at any time is not satisfactory to the University, even though no specific charge be made against the student.

General oversight of the conduct of students and the administering of discipline are under the supervision of the Vice-President in the Division of Student Life. The duty of immediate supervision, guidance, and control of the students in each college is entrusted to the dean of that college. However, through the expressed willingness of the students of the University to assume the responsibility of maintaining high standards of morals and honor, the student body has properly become to a great degree self-governing. Two councils, one of men and the other of women, each composed of duly elected representatives of the student body, exercise the authority granted the students for their respective colleges to investigate all cases of misconduct, as well as all other cases of violation of proper student standards and traditions, and to make recommendations of penalties based on their findings.

The student councils have been helpful to the administrative authorities of the University. They exert a guiding and stimulating influence for the promotion of high ideals of conduct and of student relationships.

ASSEMBLY AND CLASS MEETINGS: The sophomore, junior and senior classes of Trinity College and the College of Engineering meet on call to discuss matters pertinent to the individual group. The freshman classes of these colleges hold weekly meetings with compulsory attendance.

In the Woman's College an assembly of all students is held on the first and second Monday evenings; house meetings are held on third Monday evenings; and class meetings, with the exception of the freshman class, are held on fourth Monday evenings. The freshmen meet as a class each week. In each instance, attendance is required.

AUTOMOBILE REGULATIONS: Freshmen are not permitted to own or operate motor vehicles at the University. Members of other classes in Trinity College and the College of Engineering are permitted

to operate motor vehicles provided they are registered and operated in accordance with University regulations; under the same conditions seniors in the Woman's College may use cars.

SCHOLASTIC REGULATIONS FOR PARTICIPATION IN ATHLETIC AND OTHER ACTIVITIES: A student who receives less than a passing grade on more than six hours of his required work of the preceding term is ineligible to represent the University in any athletic contest, concert, or other public event.

Members of athletic teams or other student groups engaging in public representation of the University are expected to be carrying their current work satisfactorily. A student may be barred from participation in such representation if, in the opinion of the dean, he fails to meet this requirement.

RELIGIOUS LIFE: "Eruditio et Religio," the motto emblazoned on the seal of the University, proclaims belief in the essential union of knowledge and religion in the educational process. Provisions, both academic and extra-curricular, are made for the realization of this aim. Academic offerings in the field of Religion are described elsewhere in this catalog. The description below concerns non-academic provisions.

The Gothic Chapel stands at the center of the campus, an inspiring symbol of the place of religion in the well-balanced life. This is the home of the Duke University Church, Interdenominational. The Church encourages the cultivation of the spiritual and moral life of students through participation in a program of varied activities.

The Service of Worship on Sunday morning has special appeal. Several hundred students participate in these services by singing in the choir, which has gained national reputation. At least one hundred other students aid in special ways, as ushers, collectors, and assistants at communion services. Hundreds come to worship and are inspired by the beauty and challenge of these services.

But the Church also encourages the students to translate their worship into effective Christian living. A rich program of activities is offered, so that every student can find something that will challenge his interests and meet his needs as an active member of his faith.

These activities are developed along three lines: interfaith, interdenominational, and denominational. Protestant, Jewish, and Roman Catholic students are organized in their respective groups; but periodically they join together in interfaith programs which are carefully planned to respect the traditions of the various faiths. Interdenominational activities for all Protestant students are emphasized because it is believed that a more complete Christian faith is developed through sharing knowledge and fellowship with Christians of other churches.

Vital to the religious life at Duke are the various church groups

known on the campus as the Protestant Denominational Groups. The Church looks to these organizations, under the leadership of their respective chaplains or advisers, to provide a continuing denominational experience through worship, study, service activities, and recreation. The promotion of churchmanship as a part of the total educational experience at Duke is designed to equip students to assume the role of leaders in their local church when they leave the University.

Additional features of the program are the organ recitals and special musical services which are given from time to time on Sunday afternoons in the Chapel. During the summer, carillon recitals are presented twice a week.

The total religious program is under the direction of the Official Board of the Church, composed of an equal number of faculty-staff members and students. Professional guidance is given by the Preacher to the University, the Chaplain to the University, the Choir Director and the Organist, the Associate Directors of Student Religious Life, and the denominational Chaplains.

PUBLIC LECTURES AND SOCIAL FUNCTIONS: The Faculty Council on Public Lectures supervises all public lectures, addresses, and other public events given under the auspices of the University or of any organization in any way connected with the University. All dates and programs must be approved by the Council, which prepares an official yearly calendar. Current announcements of public occasions appear in the Weekly Calendar of Duke University issued by the Department of Alumni Affairs.

A social committee composed of students and staff members from the undergraduate colleges exercises general supervision over major social functions. The executive officers of the committee are the Dean of Men and the Dean of Undergraduate Women.

MEDICAL CARE: With the exceptions noted below, full medical and surgical care is furnished to all regularly matriculated students of the University. The cost is included in the general fee paid each semester and in the fees charged each student in the summer quarter*.

The service is under the direction of the University Physician with the cooperation of the Staff. It includes hospitalization in Duke Hospital, as deemed necessary by the Hospital Staff but limited to thirty days; medical and surgical care under the supervision of a senior physician or surgeon; drugs, X-ray work, and ward nursing. Special nursing is not covered. The student pays for his board while in the hospital. Refraction of eyes, treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernias, pilonidal cysts and other elective surgery, chronic skin conditions, endocrine

* Only those students who have paid the fee for the semester, quarter or summer session during which illness occurs are entitled to the services described herein.

disturbances, etc., and accidents or illnesses occurring during vacations or while off the campus, are not included in this service. The cost of any necessary braces and orthopaedic appliances, as well as of special nursing, must be borne by the student and blood used for transfusions must be paid for or replaced. If the student has insurance providing hospitalization, surgical, or medical benefits, the benefits shall be applied to the cost of his medical care.

Advisory consultation with a Psychiatrist at no expense is available to students through referral either by the Student Health Physicians or by the Deans but office visits for psychotherapeutic interviews cannot be included in this service.

A woman physician is in residence and a nurse in constant attendance at the Woman's College Infirmary. Patients in this Infirmary can be transferred to the Duke Hospital at any hour of the day or night. Male students receive ambulant care at the student health office in the hospital building during dispensary hours. Men are admitted to the hospital directly whenever necessary. The emergency service and the specialist consulting services of the Hospital and Medical School are always available.

When the student comes to the University, he is given a careful physical examination. Any physical defects are recorded along with the record of the questionnaire from the family physician. All students are requested to be successfully vaccinated against smallpox before admission to the University. It is urgently advised that they take typhoid vaccine if they have not done so within three years, and that all male undergraduates be actively immunized to tetanus by injections of toxoid.

PHYSICAL EDUCATION: Students of Trinity College and the College of Engineering are required to engage in some type of physical activity for two years or four full semesters. This work consists of participation in natural, practical, physical activity for at least three one-hour periods each week. The purpose is to improve body control and strength through big muscle activities, to stimulate the development of mental and physical alertness, to establish habits of regular exercise, and to give training and experience in various kinds of recreational sports that will be indulged in after the student is graduated from the University.

Intramural sports are promoted and fostered in all phases of athletic activity. Meets, tournaments, and leagues are seasonally organized in the different sports. All students of the two colleges are eligible to enjoy the intramural privileges, provided they comply with the intramural rulings. Participation in these activities is entirely voluntary, but they are very popular because they provide an opportunity for every man to enter into competition and recreation in those sports which he enjoys most.

The work of the Physical Education Department of the Woman's College is designed in part to give the students of that college an appreciation of the value of activity for general physical well-being, skill in one or more activities which can be enjoyed as recreation during and after college, a well-developed and well-coordinated body, and a knowledge of good posture and efficient handling of the body in everyday activities. To this end, students are allowed to choose from a large number of activities including individual, dual, and team sports, swimming, and several types of dancing. In order to insure a variety of skills, each student, during her three years of required physical education, must elect one semester's work in each of the following types of activity: individual or dual sports, and dance. All students who are unable to pass the swimming test must take one semester of swimming before graduation. At the mid-point in the fall semester of the freshman year, the activity course ends and all freshmen take one period a week of body mechanics and one of social hygiene for the remainder of the semester.

The Dance Group, the Swimming Club, and the other sports clubs run by the Woman's Athletic Association give opportunities for all students to take part in the types of intramural activities most interesting to them. The swimming pool, tennis courts, and other athletic equipment are available to all students for use at specified times.

In order to meet certain hygienic aspects of physical education and intramural athletics, the University has made available for all students, in addition to facilities for physical activity and recreation, the following equipment and services:

1. (a) MEN. A regulation uniform: shirt, trunks, supporter, socks, sweat clothes, and towel.
- (b) WOMEN. Gym suit, dance costume, bathing suit, warm-up suit.
2. Provision for locker and handling of uniform.
3. The laundering of uniform and towel as needed.

The privileges and services listed above are available to all students who pay full fees, as long as they comply with the rules and regulations established for the care and handling of the equipment.

THE INTERCOLLEGIATE ATHLETIC PROGRAM: The program, controlled entirely by the University, consists of the organization and training of representative freshman and varsity teams in football, basketball, track, cross country, golf, gymnastics, lacross, soccer, swimming, tennis, and wrestling.

The program is under the supervision of the Athletic Council, composed of seven members. Three of the seven are appointed from the faculty as follows: one member from the Officers of General Administration, one from the Officers of Educational Administration, division of the Colleges, and one from the Officers of Instruction of the undergraduate colleges. From this group the President of the

University appoints the faculty chairman, who serves as chairman of the Athletic Council and of its executive committee.

Four of the seven members are selected from the alumni. One of the four, a University Trustee, an alumnus, and a member of the Board's standing Committee on Physical Education and Athletics, is appointed not less frequently than every three years by the chairman of the Board of Trustees. The remaining three, who may not succeed themselves, are elected annually by the general Alumni Association for terms of three years. The Director of Alumni Affairs serves *ex officio* as secretary of the Council and of the executive committee.

The three faculty members of the Athletic Council constitute a committee which alone has the responsibility of enforcing the scholarship and athletic requirements of the University for participation in intercollegiate sports. The athletic eligibility rules are those of the Atlantic Coast Conference.

The executive committee of the Athletic Council is composed of the faculty chairman of the Council, one other faculty member of the Council and one alumni member of the Council. The executive committee of the Council recommends to the President of the University persons to serve as Director of Athletics and as coaches in the various sports. The election of such persons, however, rests solely with the Board of Trustees of the University or with its Executive Committee on recommendation of the President of the University. The executive committee of the Council recommends to the Athletic Council athletic schedules and the award of insignia of merit earned by members of the athletic teams. However, decisions with respect to the same rest solely with the Athletic Council subject to approval of the President.

Each of the four undergraduate classes selects annually, for terms of one year, a member of each respective class to serve in an advisory capacity to the Athletic Council upon call of the faculty chairman on the matter of awarding insignia of merit.

All funds arising from athletics are handled entirely by the Treasurer of the University. An audit of the receipts and disbursements of these funds is made annually by the official auditors of the University and a report thereof made annually to the Executive Committee of the Board of Trustees.

THE STUDENT ACTIVITIES OFFICES: The Student Activities Offices were established for the purpose of assisting and coordinating the financial activities of the various student organizations in Trinity College, the College of Engineering, and the Woman's College.

The Offices provide for student organizations a banking service through the office of the Treasurer of the University. They also afford auditing services for organizations requiring it. Permanent records of all financial activities of organizations are kept under the supervision of the Offices. The Student Activities Offices, cooperating with

the University Purchasing Department, also serve in the capacity of purchasing agent for affiliated student organizations. There is no charge for this service.

In addition to these specific services, the purpose of the Office is to promote well-organized and effective extracurricular interest.

Student Activities Offices for Trinity College and the College of Engineering are located on the West Campus, and for the Woman's College, on the East Campus.

STUDENT PUBLICATIONS: Student publications of the University are under the control of a Publications Board, which is constituted as follows: three members from the University staff and two from the alumni, appointed by the President; six men from the junior and senior classes, elected by the students in Trinity College and the College of Engineering; four women from the junior and senior classes, elected by the students in the Woman's College; and four editors and four managers of student publications, *ex officio* members without voting power. No student publications can be started at the University without the approval of the Council.

The four publications of campus-wide interest are the *Archive* (monthly); the *Chanticleer* (annual); the *Chronicle* (semiweekly); *Duke Peer*. The Engineering students issue a professional bimonthly magazine, the *DukEngineer*.

STUDENT BROADCASTING SYSTEM: The student broadcasting system of the University is under the control of a Radio Council, which is constituted as follows: two members from the University staff, appointed by the President; three members from the faculty who serve as engineering, production, and business advisers; three men from the junior and senior classes, including one engineer, elected by the students in Trinity College and the College of Engineering; one woman from either the junior or senior class, elected by the students of the Woman's College; one man from either the junior or senior class, elected by the members of the Student Legislature of the Men's Student Government Association from within the membership of that body; one woman from either the junior or senior class, elected by the members of the Woman's Student Government Council from within the membership of that body; and four student managers of the student broadcasting system, *ex officio* members without voting power.

STUDENT ORGANIZATIONS: The following organizations are active on the campus: *The Men's Student Government Association of Duke University* comprises all men students in Trinity College and the College of Engineering. Through its officers and a council it initiates policies and oversees matters within the control of the student body. The council is composed of nine members: three executive

officers, two representatives from the senior class, two from the junior class, one from the sophomore class, and one from the College of Engineering.

The Woman's Student Government Association is similar in character to the men's association. Its council is composed of the officers of the Association, house presidents, house judicial representatives, and president of the Town Girls' Club, class representatives, and chairman of the Freshman Advisory Council, *ex officio*.

The Young Men's Christian Association and the *Young Women's Christian Association* are branches of the national student Christian Associations. Each body aims to enrich not only the religious life of its members as individuals but also to promote religious group activity. These organizations carry on extensive activity in the fields of social service, faculty-student relations, forums, and other related projects. Membership in the Student Religious Council relates these organizations to the total religious activities program of the Duke University Church, Interdenominational.

Other organizations and activities include the following: Air Force Club; Arnold Air Society; Bench and Bar Society (Pre-Legal Undergraduates); Class of 1954; Class of 1955; Class of 1956; Class of 1957; Classical Club (Men); Club Panamericano; Commodore Club (N.R.O.T.C. Social Organization); Debate Council; Duke-Charlotte Club; Duke Independent Society (Men); Duke Players; Duke Square Dance Club; Duke University Church (Interdenominational); Duke University Handbook, and Directory; Engineers' Club; G. O. Politan Club; Graduate Club; Hoof 'n' Horn; Interfraternity Council; Intramural Athletic Department; Men's Freshman Advisory Council; Pegram Chemistry Club; Pep Board; Photography Club; Pre-Medical Society; Publications Board; Quadrangle Pictures; Shoe and Slipper Club; Spring Frolic Fund; Student Religious Council; Town Boys' Club; Town Girls' Club; Woman's College Student Forum; Women's Athletic Association; Women's Freshman Advisory Council; Women's Pan-Hellenic Council; Young Democrats Club; and the Campus Chest Fund.

The following honorary orders and fraternities have chapters on the campus: National—Alpha Kappa Psi (Economics); Alpha Phi Omega (Scouting); Chi Delta Phi (Literary); Delta Phi Alpha (German); Eta Sigma Phi (Classics); Kappa Chi (Pre-Ministerial); Kappa Delta Pi (Educational); Mu Sigma (Psychology); Omicron Delta Kappa (Leadership—Men); Phi Beta Kappa (Scholarship); Phi Eta Sigma (Freshman Scholarship—Men); Phi Sigma (Biology); Pi Gamma Mu (Social Science); Pi Mu Epsilon (Mathematics); Sigma Delta Pi (Spanish) Sigma Pi Sigma (Physics); Sigma Xi (Science); Tau Kappa Alpha (Forensic); Tau Phi Omega (French).

Local—Ivy (Scholarship—Freshmen Women); Delta Phi Rho Alpha

(Athletic—Women), Varsity “D” Club (Athletic—Men); Beta Omega Sigma (Leadership—Sophomore Men); Sandals (Leadership—Sophomore Women); Phi Kappa Delta (Leadership—Women); Red Friars (Leadership—Senior Men); White Duchy (Leadership—Senior Women).

Engineering (Professional)—American Institute of Electrical Engineers; the American Society of Civil Engineers; and the American Society of Mechanical Engineers. Engineering (Honorary)—Tau Beta Pi (National Honorary Engineering Fraternity); Eta Kappa Nu (Electrical Engineering National Honorary Society); Pi Tau Sigma (Mechanical Engineering National Honorary Society); Order of St. Patrick (Leadership).

Local musical organizations available to qualified members are: Chamber Orchestra; Concert Band; Madrigal Singers; Marching Band (Men); Men’s Glee Club; Music Study Club; Symphony Orchestra; University Chapel Choir; Women’s Glee Club.

The following national social fraternities have chapters on the campus: Alpha Tau Omega; Beta Theta Pi; Delta Sigma Phi; Delta Tau Delta; Kappa Alpha; Kappa Sigma; Lambda Chi Alpha; Phi Delta Theta; Phi Kappa Psi; Phi Kappa Sigma; Pi Kappa Alpha; Pi Kappa Phi; Sigma Alpha Epsilon; Sigma Chi; Sigma Nu; Sigma Phi Epsilon; Tau Epsilon Phi; Theta Chi; Zeta Beta Tau.

The following national social sororities have chapters on the campus: Alpha Chi Omega; Alpha Delta Pi; Alpha Phi; Alpha Epsilon Phi; Delta Delta Delta; Delta Gamma; Kappa Alpha Theta; Kappa Delta; Kappa Kappa Gamma; Phi Mu; Pi Beta Phi; Sigma Kappa; Zeta Tau Alpha.

Honors and Prizes



HONORS: To be eligible for Honors a student must earn, during the year, credit for at least the normal load of the college in which he is registered. All semester hours on which a student receives a grade are counted in the determination of Honors. Students in the freshman, sophomore, and junior classes who earn an average of at least two and one-half quality points per semester hour are given Honors.

The degree of Bachelor of Arts or of Bachelor of Science with distinction is conferred in accordance with the following rules:

To be eligible for general Honors at graduation a student must have completed in residence a minimum of ninety semester hours. Those students who earn an average of at least two and one-half quality points per semester hour are recommended for a degree *magna cum laude*. Those who earn an average of at least two and three-fourths quality points per semester hour are recommended for a degree *summa cum laude*.

MEDALS AND PRIZES: *The Wiley Gray Medal* was established by the late Robert T. Gray, Esq., of Raleigh, North Carolina, to be awarded annually in memory of his brother. It is given for the graduating oration that shall be, in the opinion of a committee, the best, with respect to both declaration and composition.

The Debate Council authorizes the awarding of medals to members of the graduating class who have represented the University in at least two intercollegiate debates. The medals are given by the local chapter of the Tau Kappa Alpha Fraternity.

The Robert E. Lee Prize is the gift of The Reverend A. W. Plyler, of the Class of 1892, and Mrs. Plyler. The sum of \$50 is awarded annually at Commencement, preferably to that member of the senior class of Trinity College or the College of Engineering who, in character and conduct, in scholarship and athletic achievement, in manly virtues and capacity for leadership, has most nearly realized the standards of the ideal student. The dean of the college, the Graduate Manager of Athletics, and the President of the Student Council constitute a committee to draft and adopt regulations governing the award.

Alpha Kappa Psi Medallion. Beta Eta Chapter of Alpha Kappa Psi, a professional fraternity in commerce, awards annually the Alpha Kappa Psi Scholarship Key to the male senior student pursuing a degree in the Department of Economics and Business Administration

who has attained the highest scholastic average for three years of collegiate work in this University.

Medal of the North Carolina Association of Certified Public Accountants. The North Carolina Association of Certified Public Accountants annually awards a medal to the senior who, in the judgment of his instructors, is the most outstanding student in accounting in his graduating class.

Julia Dale Prize in Mathematics. This is a prize of books given annually to the undergraduate who shows the greatest proficiency in the study of calculus.

The Milmow Prize, consisting of one year's subscription to the *Electrical World*, is awarded each year to that student from North or South Carolina graduating in the Department of Electrical Engineering who, in the opinion of the faculty of that department and as shown by his grades, has made the most progress in electrical engineering during his last year in college.

The Tau Beta Pi Prize. The North Carolina Gamma chapter of Tau Beta Pi, national honorary engineering fraternity, awards each year a suitable prize, such as an engineering handbook, to a sophomore student in engineering for outstanding scholastic achievement during the freshman year.

The Phi Lambda Upsilon Prize. Phi Lambda Upsilon, honorary chemical society, yearly awards a suitable prize to an outstanding junior who is majoring in chemistry. The recipient's name is inscribed on a plaque displayed in the Chemistry Library.

The Pegram Chemistry Club Prize is awarded in the spring of each year for scholarship in chemistry, physics, and mathematics. The prize consists of a one-year junior membership in the American Chemical Society and a one-year subscription to either the *Journal of the American Chemical Society* or *Industrial and Engineering Chemistry*. To qualify for this prize, the student must (1) be enrolled as an undergraduate of Duke University and (2) be taking or have taken a fourth-year chemistry course. The winner of this prize is selected by a committee consisting of at least one faculty member and at least two members of the Pegram Chemistry Club; the selection is based on the quality-point average for all courses taken in chemistry, physics, and mathematics. In case of a tie equal awards are given.

The Sigma Xi Prize. The Society of the Sigma Xi, honorary scientific society, is devoted to the encouragement of scientific research, and seeks to stimulate those who show promise of accomplishment in scientific research. As an encouragement to younger men and women the Duke Chapter of Sigma Xi has established the following prizes to be awarded annually to students resident at Duke University: \$20.00 for an undergraduate project or paper, \$20.00 for a Master's thesis or its equivalent, and \$40.00 for a Ph.D. dissertation or its

equivalent. Nominations, recommendations, copies of theses, reports or other material must be in the hands of the Secretary of the Chapter on or before May 5.

The Erasmus Club Prize in the Humanities. The Erasmus Club, founded in 1925, a group of Duke faculty members interested in research in language, literature, and the arts, seeks to stimulate interest and study in these fields. To encourage Duke students in this field, the Erasmus Club has established an annual prize amounting to \$25.00, for the best original essay by an undergraduate which embodies the results of research, criticism, or evaluation in some subject in the humanities. Prospective competitors should consult some member of the faculty, preferably their major professor. Essays must be type-written and must be submitted to the president of the club before the first of April. The club reserves the right to withhold the prize in case there are no essays of acceptable quality.

The Anne Flexner Memorial Award in Creative Writing has been established by the friends of the family of Anne Flexner, who graduated from Duke in 1945. It consists of fifty dollars in cash and a book bearing the Anne Flexner Memorial Award bookplate. The award is given annually for the best piece of creative writing submitted by a Duke undergraduate. The competition is limited to short stories (5,000-word limit), one-act plays (5,000-word limit), poems (100-line limit), and informal essays (3,000-word limit). Only one manuscript may be submitted by a candidate, and manuscripts must be delivered to the English Office, Room 2G5, West Duke, before April 15.

The William Senhauser Prize is given by his mother in memory of her son, a member of the Class of 1942, who lost his life in the Pacific Theatre of War on August 4, 1944. The award is made annually to the sophomore or junior in Trinity College or the College of Engineering who has made the greatest contribution through participation and leadership in intramural sports. The winner of this prize is chosen by a committee selected by the President of the University.

The *Friends of Duke University Library* offer three prizes of \$25.00, \$15.00, and \$10.00, in an annual contest open to all undergraduate students for the best book collections acquired during their college years. The contest is supervised by the Undergraduate Committee of the Friends of the Library, which announces each fall the terms of the award. Inquiries may be directed to the Curator of Rare Books. Collections entered in the contest are exhibited each spring in the General Library, and the prizes are awarded on the basis of the student's collection and a personal interview to determine the overall planning and objectives of his collecting activity, and his familiarity with his own books and the general field of his collecting interest.

Index

- Absences, 88
- Academic-Professional Combinations, 101
- Accounting Courses, 119
- Accounting, Specialized Program, 93
- Activities, 190
- Administration, 13
 - Alumni Affairs, 16
 - Business Administration, 15
 - Educational Administration, 13
 - General Administration, 13
 - Public Relations, 16
- Admission, 57
 - Advanced Standing, 58
 - Application for, 59
 - By Certificate, 58
 - By Examination, 58
 - Freshman Class, 57
 - Procedure, 59
 - Readmission, 59
 - Requirements, 57, 58
 - Special Students, 59
- Advanced Standing, 58
- Aesthetics Courses, 104
- Air Force Reserve Corps, 81
- Air Science Courses, 111
- Alumni Affairs Officers, 16
- American Literature Courses, 129
- Angier Duke Regional Prizes, 63
- Anthropology Courses, 171
- Application for Admission, 59
- Appointments Office, 83
- Art Courses, 105
- Art and Music Officers, 50
- Assembly Meetings, 185
- Athletic Awards, 64
- Athletics
 - Athletic Council, 189
 - Intercollegiate, 189
 - Participation in, 186
- Attendance, 87
- Automobile Regulations, 185
- Bachelor of Arts, Requirements, 91
 - General Program, 93
 - Major Field, 92
 - Specialized Programs, 93
- Bachelor of Science, Requirements, 95
- Bachelor of Science in Engineering, Requirements, 97
- Bachelor of Science in Nursing Education, Requirements, 100
- Boarding Accommodations, 76
- Botany Courses, 111
- Broadcasting System, 191
- Bureau of Testing and Guidance, 82
- Business Administration Courses, 120
- Business, Specialized Program in, 93
- Calendar of the Colleges, 7
- Chemistry Courses, 114
- Civil Engineering
 - Courses, 177
 - Degree in, 97
- Class Meetings, 185
- Class Standing, 86
- Composition Deficiencies, 89
- Conduct, 185
- Corporation, University, 11
 - Executive Committee, 11
 - University Trustees, 11
- Course Cards, 85
- Course Load, 86
- Courses of Instruction, 104
 - Accounting, 119
 - Aesthetics, 104
 - Air Science, 111
 - American Literature, 129
 - Anthropology, 171
 - Art, 105
 - Botany, 111
 - Business Administration, 120
 - Chemistry, 114
 - Civil Engineering, 177
 - Drama, 129
 - Economics, 116
 - Education, 122
 - Electrical Engineering, 179
 - English, 128
 - English Literature, 129
 - Forest Botany, 113
 - Forestry, 134
 - French, 166
 - General Engineering, 183
 - Geology, 134
 - German, 135
 - Government, 136
 - Greek, 136
 - Health Education, 139, 141
 - History, 142
 - Latin, 147
 - Mathematics, 148
 - Mechanical Engineering, 181
 - Medical Science, 150
 - Music, 107
 - Naval Science, 150
 - Nursing Education, 126
 - Philosophy, 152
 - Physical Education, 138, 139

- Physics, 154
- Political Science, 156
- Psychology, 160
- Religion, 163
- Romance Languages, 166
- Russian, 170
- Sociology, 170
- Spanish, 167
- Speech, 129
- Zoology, 174
- Credit, 86
- Degrees, Requirements for, 91
 - Academic-Professional Combinations, 101
 - Bachelor of Arts, 91
 - Bachelor of Science, 95
 - Bachelor of Science in Engineering, 97
 - Bachelor of Science in Nursing Education, 100
- Dental School, Preparation for, 95
- Dining Service, 76
- Discipline, 185
- Dismissal, 87
- Divinity School Library Staff, 55
- Dormitories, 74, 75
- Drama Courses, 129
- Economics Courses, 116
- Education Courses, 122
- Electrical Engineering Courses, 179
 - Degree in, 98
- Elementary School Teaching, 95
- Emeriti, 12
- Employment, 73
- Engineering Courses, 177
 - Degree in, 97
- English Courses, 128
- English Literature Courses, 129
- Examinations, 89
- Executive Committee, University, 11
- Expenses, 61
- Fees, 60
- Financial Information, 60
- Food Services Staff, 52
- Forest Botany Courses, 113
- Forestry Combination Course, 101
- Forestry Courses, 134
- Fraternities, 193
- French Courses, 166
- Freshman Class, Admission, 57
- General Engineering Courses, 183
- Geology Courses, 134
- German Courses, 135
- Government Courses, 136
- Grade Reports, 89
- Grades, 87
- Graduate and Professional Schools, Officers, 14
- Graduate School, Preparation for, 95
- Greek Courses, 136
- Guidance, Bureau of Testing and, 82
- Health, Officers, 50
- Health Education Courses, 139, 141
- High School Teaching, 94
- History Courses, 142
- Honoraries, 192
- Honors, 194
- Hours, Semester, 86
- House Counselors, 51
- Intercollegiate Athletic Program, 189
- Latin Courses, 147
- Law Combination Course, 102
- Law School Library Staff, 55
- Law School, Preparation for, 95
- Lectures, Public, 187
- Legal Aid Clinic Staff, 49
- Libraries, Staffs and Description, 53, 78
 - Departmental, 78
 - Divinity, 55, 78
 - Engineering, 78
 - Law, 55, 78
 - Medical, 55, 78
 - University, 53, 78
 - Woman's College, 55, 78
- Living Accommodations, 74
 - For Men, 74
 - For Women, 75
- Loans, 70
- Mathematics Courses, 148
- Matriculation, 85
- Mechanical Engineering Courses, 181
 - Degree in, 97
- Medals, 194
- Medical Care, 187
- Medical School Library Staff, 55
- Medical School, Preparation for, 95
- Medical Science Courses, 150
- Musical Organizations, 193
- Music and Art Officers, 50
- Music Courses, 107
- Naval Reserve Corps, 80
- Naval Science Courses, 150
- Nursing Combination Course, 103
- Nursing Education Courses, 126
 - Degree in, 100
- Officers of Administration, 13
 - Alumni Affairs, 16
 - Business Administration, 15
 - Educational Administration, 13

- General Administration, 13
- Public Relations, 16
- Officers of Instruction, 17
 - Instructional Staff, 17
 - Part-time Instructors, 48
- Organizations, 191
- Orientation Program, 85
- Participation in Activities, 186
- Philosophy Courses, 152
- Physical Education
 - Courses, 138, 139
 - Requirements, 188
- Physical Education Staff, Trinity College, 50
- Physics Courses, 154
- Political Science Courses, 156
- Prizes, 194
- Psychology Courses, 160
- Publications, 191
- Public Lectures, 187
- Public Relations Officers, 16
- Quality Credit, 86
- Quantity Credit, 86
- Regional Scholarships, 63
- Registration, 85
- Regulations, Academic, 85
- Religion Courses, 163
- Religious Life
 - Program, 186
 - Staff, 49
- Religious Work, Specialized Program in, 94
- Remissions of Tuition, 64
- Reports, 89
- Reserve Officers Training Corps, 80
- Residence Requirements, 87
- Residence Staff, 52
- Romance Languages Courses, 166
- Russian Courses, 170
- Scholarships, 62
 - Athletic Awards, 64
 - Remissions of Tuition, 64
 - Scholarship Grants, 65
 - Scholarship Prizes, 62
- Scholarship Grants, 65
- Scholarship Prizes, 62
- Semester Hours, 86
- Social Functions, 187
- Social Work, Specialized Program in, 94
- Sociology Courses, 170
- Sororities, 193
- Spanish Courses, 167
- Special Students, 59
- Speech Courses, 129
- Student Activities Offices, 190
- Student Aid Program, 61
- Summer Session, 83
- Teaching, Specialized Program in, 94
- Testing and Guidance, Bureau of, 82
- Transcripts, 61
- Transfer Students, 58
- Trustees, 11
- Units of Admission, 57
- University Press Staff, 49
- University Stores Staff, 53
- Woman's College Library Staff, 55
- Zoology Courses, 174

BULLETIN
OF
DUKE UNIVERSITY



The School of Law

ANNOUNCEMENTS FOR 1954-1955

VOLUME 26

April, 1954

NUMBER 6

Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

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THE SCHOOL OF LAW



ANNOUNCEMENTS FOR 1954-1955

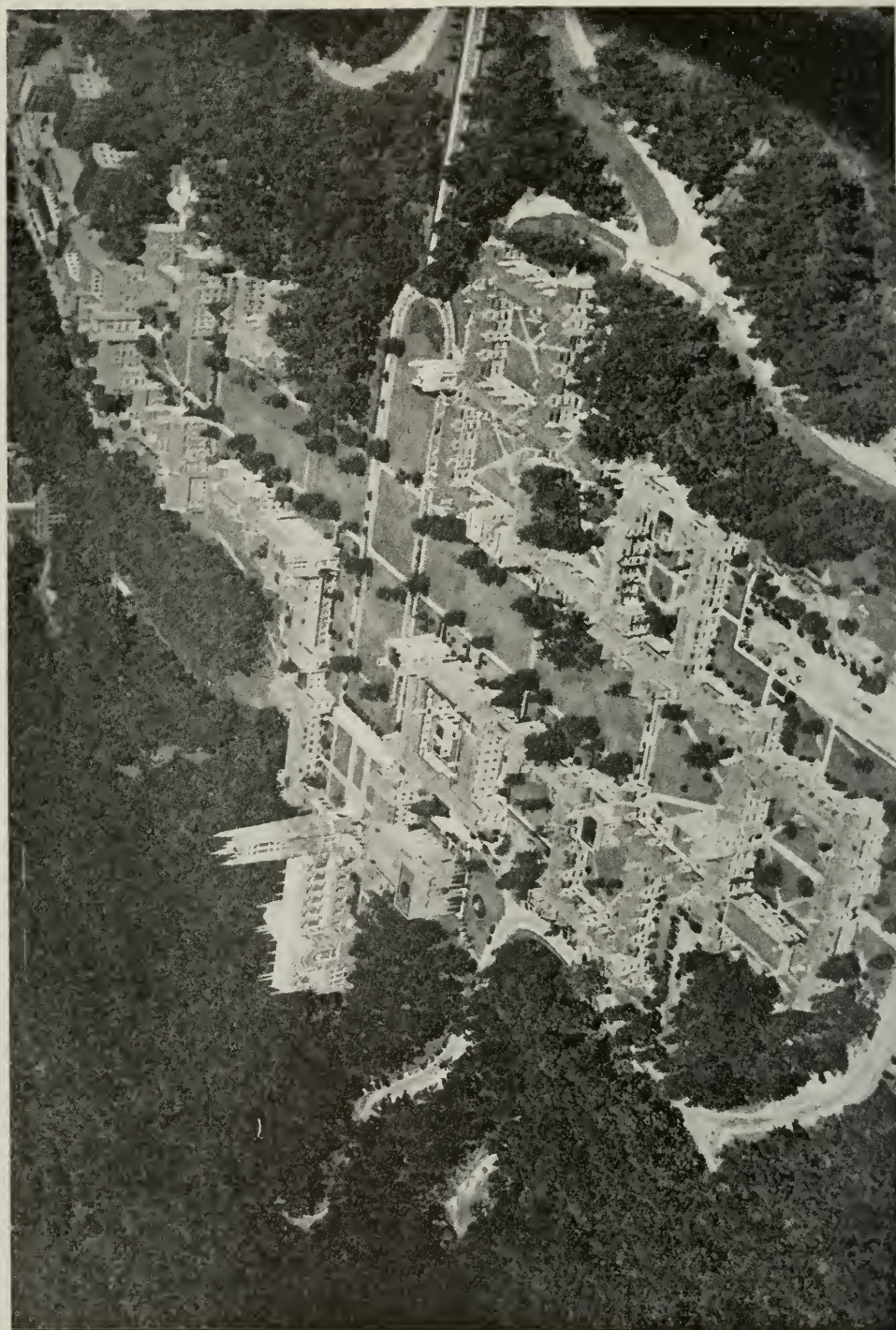
DURHAM, NORTH CAROLINA

1954

Contents



	PAGE
CALENDAR.....	5
OFFICERS OF ADMINISTRATION.....	6
FACULTY.....	7
THE SCHOOL: ITS PURPOSES AND METHODS.....	10
ADMISSION OF STUDENTS—REGISTRATION—FEES.....	11
BACHELOR OF LAWS DEGREE.....	17
GRADUATE WORK IN LAW.....	19
FACILITIES AND ACTIVITIES.....	22
PROGRAM OF INSTRUCTION.....	27
DESCRIPTION OF COURSES.....	31
STUDENTS.....	37



Calendar 1954-1955



1954

- Sept. 20—Monday, Registration Day.
Sept. 21—Tuesday, Classes begin, 9 A.M.
Nov. 25—Thursday, Thanksgiving day: a holiday.
Dec. 18—Saturday, Christmas recess begins, 1 P.M.

1955

- Jan. 3—Monday, Classes resumed, 9 A.M.
Jan. 18—Tuesday, Fall semester classes end, 5 P.M.
Jan. 20—Thursday, Mid-year examinations begin.
Jan. 29—Saturday, Mid-year examinations end.
Jan. 31—Monday, Spring semester classes begin, 9 A.M.
March 26—Saturday, Spring vacation begins, 1 P.M.
April 4—Monday, Classes resumed, 9 A.M.
May 21—Saturday, Spring semester classes end, 1 P.M.
May 23—Monday, Final examinations begin.
June 1—Wednesday, Final examinations end.
June 4—Saturday, Commencement begins.
June 6—Monday, Graduating exercises.

Officers of Administration



ARTHUR HOLLIS EDENS, Ph.D., LL.D. <i>President of the University</i>	West Campus
WILLIAM HANE WANNAMAKER, A.M., LL.D. <i>Vice-Chancellor of the University</i>	West Campus
PAUL MAGNUS GROSS, Ph.D. <i>Vice-President in the Division of Education and Dean of the University</i>	Hope Valley
CHARLES EDWARD JORDAN, A.B., I.L.D. <i>Vice-President in the Division of Public Relations and Secretary of the University</i>	813 Vickers Avenue
HERBERT JAMES HERRING, A.M., LL.D. <i>Vice-President in the Division of Student Life and Dean of Trinity College</i>	Myrtle Drive
ALFRED SMITH BROWER, A.B. <i>Business Manager and Comptroller</i>	614 West Campus
CHARLES BLACKWELL MARKHAM, A.M. <i>Treasurer of the University</i>	204 Dillard Street

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- R. G. CHERRY, Gastonia, North Carolina
- N. A. COCKE, Charlotte, North Carolina
- J. P. FRIZZELLE, Snow Hill, North Carolina

Faculty



JOSEPH A. McCLAIN, JR., A.B., LL.B., J.S.D., LL.D., *Dean and Professor of Law.*

A.B. 1925, LL.B. 1924, LL.D. 1941, Mercer University; J.S.D. 1929, Yale University; LL.D. 1944, Tulane University; Practice, Columbus, Georgia, 1925-1926; Professor of Law, Mercer University, 1926-1927; Dean and Professor of Law, Mercer University, 1927-1933; Professor of Law, University of Georgia, 1933-1934; Dean and Professor of Law, University of Louisville, 1934-1936; Tulane University Summer 1937; Dean and Professor of Law, Washington University (St. Louis), 1936-1942; Member of Council of Section on Legal Education and Admissions to Bar of ABA, 1942-1948, Chairman of Section, 1945-1947, House of Delegates, ABA, 1948-1950; Vice-President and General Counsel, Terminal R.R. Association of St. Louis, 1942-1945; General Counsel, Wabash R.R. Company, 1945-1950; Dean and Professor of Law, Duke University, since 1950.

W. BRYAN BOLICH, A.B., B.A. (Juris.), M.A., B.C.L., *Professor of Law.*

A.B. 1917, Duke University; Duke University Law School, 1919-1921; B.A. (Juris.), 1923, B.C.L. 1924, M.A. 1928, Oxford University; general practice, 1924-1927; Legal Attaché, American Embassy, Rome, 1950; University of North Carolina, Summer 1951; Professor of Law, Duke University, since 1927.

JOHN S. BRADWAY, A.B., A.M., LL.B., *Professor of Law and Director of the Legal Aid Clinic.*

A.B. 1911, A.M. 1915, Haverford College; LL.B. 1914, University of Pennsylvania; general practice, 1914-1929; Legal Aid Society of Philadelphia, 1914-1920; chief counsel, Philadelphia Legal Aid Bureau, 1920-1922; Secretary, National Association of Legal Aid Organizations, 1923-1940, President, 1940-1942; Visiting Professor of Law and Director of the Legal Aid Clinic, University of Southern California, Summer 1928; Professor of Law and Director of the Legal Aid Clinic, University of Southern California, 1929-1931; Vice-President, N. C. Bar Association, 1945-1946; Visiting Professor, University of North Carolina School of Social Work, Winter and Spring Quarters, 1949-1953; Professor of Law and Director of the Legal Aid Clinic, Duke University, since 1931.

EDWIN C. BRYSON, LL.B., *Associate Professor of Law.*

University of North Carolina, 1922-1925; Duke University, 1932-1933; LL.B. 1937, University of Oregon; general practice, 1927-1930; assistant in Duke University Legal Aid Clinic, 1931-1947; Duke University Counsel since 1945; Associate Professor of Law, Duke University, since 1947.

H. CLAUDE HORACK, Ph.B., LL.B., LL.D., *Professor of Law Emeritus.*

Ph.B. 1899, LL.B. 1900, State University of Iowa; LL.B. 1904, Harvard University; LL.D. 1937, Tulane University; LL.D. 1939, Wake Forest College; Assistant Professor of Law, University of Wisconsin, 1904-1907; Professor of Law, State University of Iowa, 1907-1930; University of Michigan, Summer 1922; University of Wisconsin, Summer 1924; University of Southern California, Summer 1931; Stanford University, Summer 1936; Adviser, Council of Legal Education and Admissions to the Bar of ABA, 1927-1930, member of Council, 1940-1945; Secretary, Association of American Law Schools, 1926-1928, President, 1929; Dean and Professor of Law, Duke University, 1934-1947; Professor of Law, 1930-1934, 1947-1948; Professor of Law Emeritus, since 1948.

ROBERT KRAMER, A.B., LL.B., *Professor of Law; Editor, Law and Contemporary Problems; and Editor, Journal of Legal Education.*

A.B. 1935, LL.B. 1938, Harvard University; Counsel, National Labor Relations Board, 1938-1940; Counsel, Anti-Trust Division Department of Justice, 1941-1942; Military service, 1940-1941, 1942-1946, Lieutenant Colonel, Ordnance Department, Army of the United States, Legal Division, Office Chief of Ordnance, general counsel, Research and Development Service, Ordnance Department; general practice, 1946-1947; Associate Professor of Law, Duke University, 1947-1949; Professor of Law, since 1949.

ELVIN R. LATTY, B.S., J.D., J.Sc.D., *Professor of Law.*

B.S. 1923, Bowdoin College; J.D. 1930, University of Michigan; J.Sc.D. 1936, Columbia University; Instructor in Romance Languages, University of Vermont, 1923-1927; general practice, 1930-1933; Special Fellow, Columbia University, 1933-1934; Associate Professor of Law, University of Kansas, 1934-1935; Professor of Law, University of Missouri, 1935-1937; George Washington University, Summer 1937; Stanford University, Summer 1938; University of North Carolina, Summer 1942, 1947, 1949; University of Texas, Summer 1951; Special Assistant to the American Ambassador, Caracas, 1942-1943; Acting Assistant

Chief, Foreign Funds Control Division, Department of State, 1943; Professor of Law, Duke University, since 1937.

CHARLES H. LIVENGOD, JR., A.B., LL.B., *Professor of Law.*

A.B. 1931, Duke University; LL.B. 1934, Harvard University; general practice, 1934-1940; Regional Attorney for the Seventh Region, Wage and Hour Division, U. S. Department of Labor, 1940-1941; Chief of the Wage-Hour Section, Office of the Solicitor of Labor, 1941-1942; Lieutenant (j.g.) and Lieutenant, U.S.N.R., 1942-1945; general practice, 1945-1948; Lecturer in Law, Duke University, 1946-1948; University of North Carolina, Summer 1948; George Washington University, Summer 1949; Associate Professor of Law, Duke University, 1948-1951; Associate Editor of the *Journal of Legal Education*, 1951-1952; Professor of Law, Duke University, since 1951.

CHARLES L. B. LOWNDES, A.B., LL.B., S.J.D., *Professor of Law.*

A.B. 1923, Georgetown University; LL.B. 1926, S.J.D. 1931, Harvard University; general practice, 1926-1927; Assistant Professor of Law, Georgetown University, 1927-1928; Professor of Law, Georgetown University, 1928-1930; Research Fellow, Harvard Law School, 1930-1931; Professor of Law, Georgetown University, 1931-1934; Professor of Law, Duke University, since 1934.

MALCOLM McDERMOTT, A.B., LL.B., *Professor of Law Emeritus.*

A.B. 1910, Princeton University; LL.B. 1913, Harvard University; general practice, 1913-1930; Dean and Professor of Law, University of Tennessee, 1920-1930; University of Southern California, Summer 1929; Legal Consultant, Department of Defense, 1951; Professor of Law, Duke University, since 1930; Professor of Law Emeritus, since 1954.

DOUGLAS BLOUNT MAGGS, A.B., J.D., S.J.D., *Professor of Law.*

A.B. 1922, J.D. 1924, University of California; S.J.D. 1926, Harvard University; general practice, 1924-1925; Assistant Professor of Law; University of California, 1926-1927; Professor of Law, University of Southern California, 1927-1930; Visiting Professor of Law, Columbia University, 1928-1929; Yale University, second semester, 1935-1936; University of California, Summer 1927; Cornell University, Summer 1928; University of Chicago, Summer 1929; University of Southern California, Summer 1930; Stanford University, Summer 1935; University of North Carolina, Summer 1936, 1948; Special Assistant to the Attorney general of the United States, 1938-1939, 1942-1943; Chief of Wage-Hour Unit, Department of Justice, 1939; Chief Consultant to the General Counsel, Board of Economic Warfare, 1942; Chief Legal Consultant, Office for Emergency Management, 1942-1943; Solicitor, United States Department of Labor, 1943-1945; Professor of Law, Duke University, since 1930.

MELVIN G. SHIMM, A.B., LL.B., *Assistant Professor of Law; Associate Editor, Law and Contemporary Problems; Associate Editor, Journal of Legal Education; and Faculty Advisor, Duke Bar Journal.*

A.B. 1947, Columbia University; LL.B. 1950, Yale University; 2nd Lt., FA (AUS), 1943-1946; general practice, 1950-1951; Counsel, Wage Stabilization Board, 1951-1952; Bigelow Fellow, University of Chicago Law School, 1952-1953; Assistant Professor of Law, Duke University, since 1953.

DALE F. STANSBURY, B.S., LL.B., J.S.D., *Professor of Law.*

B.S. 1914, Valparaiso University; LL.B. 1917, Indiana University; J.S.D. 1929, Yale University; Sterling Research Fellow, Yale University, 1928-1929; Deputy Attorney General of Indiana, 1918-1924, 1928; private practice, 1925-1927; Professor of Law, Mercer University, 1929-1935; Dean and Professor of Law, Wake Forest College, 1935-1944; Professor of Law, University of Tennessee, 1944-1946; Professor of Law, Duke University, since 1946.

ROBERT RENBERT WILSON, A.B., A.M., Ph.D., LL.D., *Professor of Political Science and Lecturer on International Law.*

A.B. 1918, Austin College; A.M. 1922, Princeton University; Ph.D. 1927, Harvard University; LL.D. 1940, Austin College; Carnegie Fellow in International Law, 1922-1923, 1924-1925; Member, Advisory Committee, Harvard Research in International Law, 1935—; Member, Board of Editors, *American Journal of International Law*, 1937—; United States Department of State: Assistant in Treaty Division, 1931-1932; Adviser on Commercial Treaties, 1944-1946; Consultant on Commercial Treaties, at various times, 1946-1953; Assistant Professor of Political Science, Duke University, 1925-1927; Associate Professor 1927-1929; Professor 1929—; Chairman, Department of Political Science, Duke University, 1934-1948; Fulbright Professor, Law School of Istanbul University, 1951-1952; Lecturer on International Law (School of Law), since 1948.

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Committee on Graduate Study: Mr. Latty, Chairman; Messrs. Bolich and Stansbury.

Committee on Pre-Legal Affairs: Mr. Bradway, Chairman; Messrs. McClain and Lowndes.

Committee on Relations with Bench and Bar: Mr. McDermott, Chairman; Messrs. Bryson and McClain.

Committee on Student Affairs: Mr. Bradway, Chairman; Messrs. Bryson and McClain.

Law and Contemporary Problems Editorial Advisory Board: Messrs. Bradway, Latty, McClain and Stansbury.

The School: Its Purposes and Methods



BUILT on the foundation of the School of Law of Trinity College, with its history of legal instruction running back to the middle of the past century, the Duke University School of Law was established in 1924. In 1930 the School was moved into its present building, the Faculty and library were greatly increased, and the activities of the School broadened. The School of Law is a member of the Association of American Law Schools and is on the "Approved List" of the American Bar Association. More than twenty-three states and forty-nine institutions of higher learning are represented in its student body.

The curriculum of the School of Law provides thorough preparation for the practice of law in any state; its graduates have been admitted to the bar in over forty states and the Territory of Hawaii. Opportunities for specialization in particular branches of the law are afforded.

In carrying out the trust imposed by the indenture establishing the Duke Endowment, the School of Law seeks to have the student acquire knowledge and comprehension not only of legal doctrine, but also of the judicial process and of the social, economic, and political problems with which law and lawyers must deal. The method of instruction employed compels analysis of judicial opinions and inquiry into the non-legal as well as the legal considerations which underlie them. In appropriate courses, special consideration is given to the work of the legislative and administrative agencies of government. In recognition of the increasing importance of the role of the lawyer in representing private interests before government agencies and in government service, an unusually broad program is offered in the public law field. Scope for creative student work is provided by seminar courses and supervised individual study and research.

Practical training is not left for the first years of practice. A carefully integrated series of courses is designed to give students actual experience in the work of lawyers. Legal research and writing courses and moot court work in the first and second years are followed in the third by seminar courses emphasizing legal planning and drafting and by practice courses and work in the Legal Air Clinic. A student bar association affords a means whereby the student may gain acquaintance with the professional organizations through which a lawyer may and should contribute to the well-being of his profession and of society.

For details of the program of study see Program of Instruction, page 27. The separate courses are described on pages 31 through 36.

Admission, Registration, and Fees



Admission

DIRECTIONS TO APPLICANTS FOR ADMISSION

APPPLICATION must be made on the prescribed Law School application blank which will be sent upon request. No application can be finally passed upon until all required documents are on file. These documents are: (1) the application itself, to which a recently made personal photograph should be attached; (2) a complete transcript of record and evidence of graduation or right to honorable withdrawal from the institution from which credit is offered; (3) letters from (a) a responsible official of the college attended, and (b) a responsible person in the applicant's home community; (4) a report of the applicant's score on the Law School Admission Test described below; (5) a medical certificate on a form supplied by the Law School.

The Law School seeks to select students who give promise of leadership in some of the various phases of professional activity. Applicants for admission and their sponsors are requested to keep this fact in mind.

The Law School Admission Test, referred to above, is administered by the Educational Testing Service and is participated in by a number of the leading law schools of the country. It is given four times a year at examination centers conveniently located throughout the United States. No special preparation for the test is necessary, since it is designed to measure aptitudes rather than knowledge of subject matter. The applicant's score on the test will be considered along with other data in passing upon his admission to the Law School. Application forms and information concerning the test should be procured by writing directly to the Educational Testing Service, P. O. Box 592, Princeton, New Jersey.

TIMES OF ADMISSION

Beginning students may enter only at the opening of the Fall semester in any year. Students who have completed the first year of law study at this or any other law school approved by the Association of American Law Schools may enter at the beginning of any semester.

REQUIREMENTS FOR ADMISSION

An application for admission as a candidate for the degree of Bachelor of Laws may be submitted by any person (1) who is a graduate of a college of approved standing, or (2) who has completed in a college of approved standing work equivalent in number of units to three-fourths of that required for graduation and whose college work in its entirety shows an average grade equal to that required for graduation, the requirement in each case being determined by the regulations of the college where the work was taken.

COMBINED COURSE

A number of colleges, upon application by their students, have permitted those who have completed three years of undergraduate work to enter the Law School of Duke University and upon the satisfactory completion of the first year of law school work to receive their Bachelor of Arts degree from such colleges. It is suggested that students desiring to enter Duke University School of Law make inquiry of their proper college authorities regarding this point.

A student from an undergraduate college of Duke University who has completed therein three years of study may apply to that college to enroll in a combined course wherein his first year of law study may be accepted toward the Bachelor of Arts degree, and, upon the completion of four additional semesters of law study, he will receive the Bachelor of Laws degree.

ADMISSION TO ADVANCED STANDING

Any person who has complied with the requirements for admission set forth in this announcement prior to the commencement of his law study, who presents evidence of the satisfactory completion of at least one year of study at any law school which is a member of the Association of American Law Schools, and who is eligible for readmission to the law school from which he proposes to transfer, may be admitted to advanced standing, subject to such rules as would be applicable to students in this School having a comparable scholastic record. Provisional credit for courses so completed will be given, final credit being conditioned on the completion of at least one full year of law study in this School with an average at least five points above the passing grade. Adjustment of credit for work done in such other law schools may be made by the Dean or by vote of the Faculty.

CANDIDATES FOR GRADUATE DEGREES

Applications for admission to graduate study should be addressed to the Dean of the Law School and should include transcripts of records of legal and pre-legal work. For the requirements for the graduate degrees, see pages 20 and 21.

Registration

Registration must be completed on the first day of each semester. Instruction will begin in all classes on the following day. Registration is conducted in the Law Building. All students, both old and new, are required to register at the beginning of each semester, at which time class schedules and course cards must be filled out and approved. Students who register in any semester at a date later than that prescribed are required to pay to the Treasurer of the University a penalty of \$5.00 for late registration unless excused therefrom. A student's registration for any semester is not complete until he has paid the tuition and fees for that semester. The \$5.00 penalty for late registration will be imposed, therefore, unless the student has paid his tuition and fees by registration day.

REGISTRATION FOR BAR EXAMINATION

Many states now require that a student, prior to or shortly after beginning the study of law, register with the board of bar examiners of the state if he intends to practice therein. Each student should write to the secretary of the board of bar examiners of the state in which he plans to practice and ascertain if that state makes this requirement.

CONDUCT OF STUDENTS

All students are admitted subject to the rules of the University and of the School of Law, and continuance in the School is conditioned upon the observance of such rules.

The University expects of its students loyal and hearty co-operation in developing and maintaining high standards of conduct as well as of scholarship. The University, therefore, reserves the right, and matriculation by the student is a concession of this right, to compel the withdrawal of any student whose conduct at any time is not satisfactory to the University.

Fees and Expenses .

Tuition fees are due at the beginning of each semester. The tuition fee is \$175.00 a semester. In addition, a general fee of \$50.00 per semester is required in lieu of separate fees for matriculation, medical service, and the like.

The admission of an applicant is not final until he deposits the sum of \$25.00 with the Treasurer of the University. This deposit will not be returned. It will be credited to the account of the student or, if the student is entitled to the benefits of the Servicemen's Readjustment Act or the Vocational Rehabilitation Act, it will be refunded upon his matriculation.

Law students may secure admission to all regularly scheduled University athletic contests held on the University grounds during the entire academic year by payment of the athletic fee of \$10.00 per year plus any Federal taxes that may be imposed. This fee is payable in the fall semester.

The payment of the general fee entitles the student to full medical and surgical care, with the exceptions noted below. This service is under the direction of the University Physician with the co-operation of the staff of Duke Hospital. It includes hospitalization, medical and surgical care, drugs, dressings, X-ray studies, and ward nursing. A charge for board is made at the same rate as in the University dining halls. Refraction of eyes, treatment of teeth and of all chronic conditions, such as the removal of diseased tonsils, are not included in this service. The cost of any necessary braces and orthopedic appliances, as well as of special nursing, must be borne by the student.

Due to rising costs it may be necessary to consider some readjustment of charges. In the event of an adjustment applicants will be notified.

SCHOLARSHIPS AND LOAN FUNDS

Scholarships covering tuition (\$350) are available to a limited number of first-year students, graduates of approved American universities and colleges, who are in need of such assistance. Applicants must have made excellent records in their college work and must show unusual promise of success in the study of law. In cases of exceptional merit the annual value of a scholarship may amount to as much as \$750.

Applications for scholarships should be presented to the Dean of the Law School, together with a transcript of college work and letters of recommendation from responsible persons, certifying to the character and fitness of the applicant.

Scholarship assistance will be continued as to second- and third-year students maintaining a high standard of work. The average cost of a year at Duke is approximately \$1200, which includes tuition, general fees, board, room and books. There are also a number of positions as assistants in the Law Library and as research assistants which are open to students, particularly in their second or third year, who do not receive other aids from the University.

The University administers certain endowed loan funds for the benefit of students who are not able to meet their expenses, for the purpose of helping worthy students who have established a satisfactory record at the School to continue their education.

Two funds have been provided out of which small loans may be made to tide students over temporary financial emergencies arising during the course of the year. One of these was supplied by the Law School Guild and is limited as to amount and duration of loan. The

other is due to the generosity of Mr. P. Frank Hanes of the Winston-Salem bar and is limited to the needs of selected students. These funds are administered by a committee of the Faculty.

GRADUATE LAW FELLOWSHIPS

Graduate fellowships in limited amounts are available. To be eligible for these grants, applicants must have completed with distinction the work required for the first degree in law at this Law School or some other school approved by the Association of American Law Schools, and must have been admitted to candidacy for the LL.M. or J.S.D. degree. Preference will be given to students who plan to make law teaching a career. All applications should be addressed to the Dean of the School of Law, Duke University. Fellowships will be awarded by the law Faculty on recommendation of the Committee on Graduate Study.

DINING SERVICE

Food service is cafeteria style. The cost of meals approximates \$1.75 to \$2.25 per day, depending on the need and taste of the individual. The dining facilities on the West Campus include three cafeterias with multiple-choice menus and the Oak Room where full meals and a la carte items are served.

In the Men's Graduate Center there is a cafeteria with multiple choice menus and a Coffee Lounge where sodas and sandwiches are served from 11:30 A.M. to 11:00 P.M. The prices in these dining rooms are the same as on the West Campus.

THE GRADUATE DORMITORY

Furnished double rooms may be secured in the graduate dormitory on the West Campus at \$62.50 per person per semester. A few single rooms are available at \$87.50 per semester.

Rooms may be reserved by new applicants only if they have been officially accepted by the University and if they have paid a room deposit of \$25.00. Requests should be addressed to the Duke University Housing Bureau. The initial deposit is effective for the entire period of residence in the case of a student whose attendance during regular terms is continuous. The room deposit will be refunded within thirty days after graduation upon request of the student. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit is refundable provided the Housing Bureau is notified at least sixty days prior to the beginning of the semester for which the room is reserved.

A resident student, in order to retain his room for the succeeding semester, must make application at the office of the Housing Bureau for confirmation of the reservation. In order to secure a refund of his initial room deposit, he must cancel his room reservation sixty

days prior to the registration date of the semester for which the room was reserved. All rooms which have not been reserved on or before the announced date will be considered vacant for the succeeding semester and will be reserved in the order in which applications are made.

Each student is expected to supply necessary sheets, blankets, pillows, rugs, and curtains. Furniture, beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are furnished by the University.

Law students are advised to make early application to the Housing Bureau, Duke Station, Durham, North Carolina, since assignment of rooms is made considerably in advance of the beginning of each semester. The applicant should state that he has been accepted for admission to the School of Law. All dormitory rooms are to be occupied under the rules and regulations established by the University. Law students are not required to live in the University dormitories.

LAWS REGARDING PAYMENTS

The Executive Committee of Duke University has enacted the following regulations which govern the payment of all fees due the University:

1. The President and the Treasurer of the University have no authority to suspend or in any way alter these regulations.

2. Any student who has failed to pay his bills on the dates advertised in the catalogue is denied the right to attend classes until his account is settled in full; subsequent withdrawal does not entitle a student to a refund.

3. No student is considered by the Faculty as an applicant for graduation until he has settled with the Treasurer for all his indebtedness to the University.

4. No student who has not settled all his bills with the Treasurer of the University is allowed to stand the midyear or final examinations of the academic year.

When a student wishes his bills sent to his parents or guardian, the student or his parent or guardian must so notify the Treasurer of the University in writing in due time, but this in no way releases the student from liability to established penalties, if his bills are not paid on the dates advertised.

Further information will be sent upon request. Address

THE DEAN OF THE SCHOOL OF LAW
DUKE UNIVERSITY
Durham, North Carolina

Bachelor of Laws Degree



UPON favorable recommendation of the Faculty, the degree of Bachelor of Laws will be conferred on students who shall have successfully completed six semesters' study of law, the last two semesters of work immediately preceding the granting of such degree having been completed in this School.

A student shall be deemed to have completed successfully six semesters' study of law if during this period he has

(1) secured a passing grade in courses aggregating seventy-eight semester hours;

(2) secured in every required course a grade not requiring repetition thereof; and

(3) secured a weighted average at least five points above passing in all work taken other than first-year courses, or, if the grade in such work is lower than that above specified, an average grade of five points above passing in all work taken.

Students who have spent only their last two semesters of study in residence in this School must have received a weighted average at least five points above passing for that year.

MINIMUM AND MAXIMUM STUDENT LOADS

No regular student is permitted to take less than ten course hours per semester. No first-year student is permitted to take courses in excess of the first-year program.

Second- and third-year students are not permitted to take for credit more than fifteen course hours per semester; nor to audit and take for credit more than sixteen course hours per semester. In exceptional cases, students may petition the Faculty for permission to take more or less than the prescribed maximum or minimum loads.

ATTENDANCE

Regular class attendance is required. The right to take the examinations, as well as the privilege of continuing one's membership in the School at any time, is conditioned upon regular attendance at the exercises of the School.

STANDARDS OF SCHOLARSHIP

GRADES.—The final grades in each course are given in numerical terms which are equivalent to letter grades according to the following scale: 80 to 100, A; 70-79, B; 55-69, C; 50-54, D; 0-49, F.

A grade of 50 is necessary for passing a course. Where a grade below 50 is given a student in any required course, the course must be repeated if the instructor reports the grade with the notation "must repeat." When a student is required by the instructor to repeat a course which he has failed, the grade given after such repetition supercedes the previous grade in the course.

ELIGIBILITY TO CONTINUE LAW STUDY.—Any student who at the end of his first year or at the end of any subsequent semester, has an average grade lower than 50 on all the work then taken is ineligible to continue his work in the School. Any other student (1) whose average final grade at the end of his first semester is below 50, or (2) whose average grade at the end of any subsequent semester on all the work then taken is below 55, or (3) who in any single semester or in any single year receives failure grades in courses totaling eight or more semester hours, may at any time be declared by the Dean ineligible to continue.

NOTIFICATION OF UNSATISFACTORY SCHOLASTIC STANDING.—Every student subject to the provisions of the second sentence of the paragraph above, who has not been declared ineligible to continue his work in the School will be given a formal, written notice by the Dean's Office. This notice will set forth his average grade or grades and inform him (1) that he will be subject for the ensuing year to the special supervision of the Dean who may order his dismissal from the School in the event of his failure to maintain a satisfactory scholastic standard, and (2) that he will be ineligible to receive a degree unless his work meets the scholastic requirements for graduation which will be set forth in full in such notice.

Every other student whose average final grade at the end of any semester on the work of that semester, or on all work then taken, does not exceed the minimum average grade required for graduation by more than two points will be given a notice similar to that provided for above.

Graduate Work in Law



Objectives of the Graduate Study Program

THE graduate program of the School of Law is framed with a view to the encouragement and recognition of legal scholarship. It is addressed to the needs of those who have objectives consistent with the purposes of graduate legal education. It provides training for the qualified student who aspires to a teaching career, or who wishes to become proficient in a special field of the law, to do serious legal research, to prepare himself for a public law practice in or out of government, or to acquire a broader and deeper legal education than the undergraduate curriculum offers.

Master of Laws

ADMISSION TO CANDIDACY FOR THE DEGREE OF MASTER OF LAWS

Any person who has received the first degree in law from a law school qualified for membership in the Association of American Law Schools may be admitted as a candidate for the degree of Master of Laws, provided he satisfies the Committee on Graduate Study that his objective in desiring to do graduate work in law is consistent with the purposes for which the program is offered, and provided he demonstrates to the Committee, on the basis of his law school record, his capacity to take and profit by graduate work in law. In exceptional cases an applicant who does not meet the above requirements may, on vote of the Faculty, be admitted to candidacy for this degree if he is able to demonstrate that he is specially qualified, as by reason of practice or teaching. Normally the applicant will be required to show a level of scholarship appreciably higher than that required for the first degree in law at the institution from which he received that degree. An exceptionally high record in law school and in the graduate study program is expected of those who aspire to a teaching career. It should be emphasized that the graduate study program is designed for graduates with a definite objective, not for those who seek to pursue further law study simply from disorientation.

REQUIREMENTS FOR THE DEGREE OF MASTER OF LAWS

The degree of Master of Laws is reserved for students who, having demonstrated their capacity for graduate work in law, maintain a level of scholarship substantially higher than that required for the degree of Bachelor of Laws.

The candidate for this degree is required to complete a course of study comprising not less than twenty nor more than twenty-six semester hours, or approved research equivalent thereto. Two full semesters are required for the completion of this program. A candidate for this degree is required to include in his course of study at least two of the following courses: International Law, Jurisprudence, and Legal History. In addition to the minimum requirement of twenty semester-hours, the candidate is required to submit an essay representing substantial research on a legal subject. This essay is to be prepared under the supervision of the instructor in charge of the field in which the research is done. The candidate will find it helpful to have formulated a project of research, or alternative projects, before his admission to graduate study or, at any rate, before pursuing his graduate study in residence.

The candidate's course of study will be selected, ordinarily, from the following list of courses: Public Regulation of Business Seminar, Jurisprudence, Conflict of Laws, International Law, Legal History, Advanced Legal Accounting, Corporate Planning, Debtors' Estates, Insurance, Corporate Reorganization, Securities Regulation, Credit and Insolvency, Family Law, Family Law Seminar, Future Interests, Tax and Estate Planning, Labor Relations, Labor Standards, Labor Law Seminar, Federal Taxation I, Federal Taxation II, and State Taxation. This program of study is not inflexible. In appropriate cases the candidate will be encouraged to take related work in other departments of the University. Other courses of comparable content may be substituted for those listed. In special circumstances, credit not in excess of two hours per semester may be arranged for special, supervised research projects.

Doctor of Juridical Science

ADMISSION TO CANDIDACY FOR THE DEGREE OF DOCTOR OF JURIDICAL SCIENCE

Any person holding the degree of Master of Laws from this or any other law school which is qualified for membership in the Association of American Law Schools may, on vote of the Faculty, be admitted to candidacy for the degree of Doctor of Juridical Science, provided he completed the work for the Master's degree with distinction.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF JURIDICAL SCIENCE

Upon favorable recommendation of the Faculty, the degree of Doctor of Juridical Science will be conferred on students admitted to candidacy for that degree who complete and submit a monograph or series of essays suitable for publication and deemed by the Faculty to be of distinguished character and who pass an oral examination before a special committee appointed for that examination. At least one academic year, and, in the absence of an extension granted by the Faculty, not more than three years, must elapse between the award of the Master's degree and the award of the degree of Doctor of Juridical Science. Students who have received the degree of Master of Laws from another law school must spend at least two full semesters engaged in research at this School, and in addition may be required to complete a course of study prescribed by the Committee on Graduate Study. The monograph or series of essays required may be based upon, or be an extension of, the essay required for the Master's degree, provided substantial additional research is represented.

Post-Graduate and Refresher Courses

The School of Law provides instruction for students not meeting the requirements for admission to candidacy for graduate degrees who desire refresher courses or who desire simply to complete a fourth year of law school work. The successful completion of the courses taken by such students may be evidenced by certificate of the Dean.

Facilities and Activities



The Law School Building and Its Facilities

THE Law Building, like all other structures on the main campus of Duke University, is in Tudor Gothic style of colorful Cambrian stone from the Duke University quarries. It was occupied by the School of Law for the first time in September, 1930. In it are classrooms, seminar rooms, offices for Faculty and Staff, quarters for the Legal Aid Clinic and for the Duke Bar Association, a courtroom equipped for trial court and appellate court sessions, a student lounge, and the Law Library. For a description of dormitory accommodations, see page 15.

THE LAW LIBRARY

The Law Library, containing a collection of approximately one hundred thousand volumes, is one of the largest law school collections in the South. It consists of American and English statutory and case law; a collection of Continental law materials; treaties, digests, encyclopedias; the various selected case series; a comprehensive collection of legal periodicals; and publications in the fields of history, economics, government, and other social sciences, supplemental to the strictly legal materials. The Library receives every current legal periodical of general interest printed in the English language.

There are several thousand additional volumes of a legal nature in the main University library building, immediately adjoining the Law School, as well as the general collection of over a million volumes, to all of which the law students and Faculty have convenient access.

The Law Library is administered by a professionally trained staff and is open to the public daily throughout the year and in the evenings, as well, whenever the Law School is in session.

THE LEGAL AID CLINIC

A Legal Aid Clinic was organized at the School of Law in 1931 under the direction of Professor John S. Bradway. The purpose of the Clinic is to help the student acquire: professional self-confidence, a sense of professional responsibility and professional self-control. To teach self-confidence, the student participates in a series of practical activities, such as searching a title, preparing a real case. To provide a sense of professional responsibility, a student, under supervision, confers with real clients who have real problems. These mat-

ters are carried to the best available conclusion. To teach professional self-control, the student participates in a series of exercises designed to enable him to deal in an orderly fashion with innumerable details, which together, make up the sum total of law practice.

Specifically, the student learns such matters as how to gather and evaluate facts, how to plan a campaign at law, how to interview clients, how to run his own law office. In the field of legal writing, the student prepares memoranda of law, a trial brief in real cases for lawyers in active practice and many other documents and letters. Instruction is individualized. Many of the problems require cooperation by the student on the interprofessional level with persons in other departments of the University and in the Social Welfare Agencies in the city and the state.

Approximately four hundred persons a year apply for services of the Clinic. Only those applicants who are unable to pay counsel fees, and only those cases where there is no opportunity for a contingent fee are accepted.

The activities of the Clinic are centered in a suite of offices in the Law School building, and in an interviewing office in the business center of Durham. In addition to the Director, a staff of five members of the North Carolina State Bar assists in the educational and supervisory activities of the Clinic and representing its clients in court proceedings.

Publications

LAW AND CONTEMPORARY PROBLEMS

The School of Law publishes a quarterly, *Law and Contemporary Problems*, under the editorship of Professor Robert Kramer. This periodical, now in its nineteenth volume, presents in each issue a symposium on a problem of current importance, in which the inter-related social and economic, as well as legal, factors are discussed by writers of competence in these respective fields. Where student research may contribute to the understanding of the legal aspects of such problems, student writings are accepted for publication.

The circulation of *Law and Contemporary Problems* extends not only to members of the legal profession and law libraries throughout the country, but also to industrial and financial concerns, governmental agencies, and public and general university libraries. Individual issues are not infrequently used as materials for study in university courses.

JOURNAL OF LEGAL EDUCATION

The *Journal of Legal Education*, a quarterly, is also edited at the School of Law under the direction of Professor Robert Kramer. The

publication serves as the organ for the Association of American Law Schools, providing a clearing house for ideas and professional studies in the constantly expanding field of legal education. The editorial policy of the *Journal of Legal Education* is determined by an editorial board named by the Association, assisted by an advisory committee consisting of prominent legal educators and practicing attorneys.

DUKE BAR JOURNAL

The School inaugurated in 1950-1951 the publication of the *Duke Bar Journal*, published semi-annually, the material of which is written entirely by law students under Faculty supervision. This *Journal* affords an unusually fine medium for student training in effective legal writing. Professor Shimm is Faculty advisor to the *Journal*.

Organizations and Activities

THE DUKE BAR ASSOCIATION

The Duke Bar Association was established in the spring of 1931. It is open to all the students of the Law School and is organized along the lines of the American Bar Association. Its purpose is to introduce the student to the problems considered by the bar in professional organizations and to develop professional consciousness and responsibility. A Faculty Committee on Student Affairs serves as general adviser to the student officers.

MOOT COURTS

A program of student Moot Court arguments is conducted under the supervision of the Faculty as a part of the courses in Research and Writing in which all students are required to participate.

AMERICAN TRUST COMPANY AWARDS

Since 1948-1949 the American Trust Company, Charlotte, North Carolina, has sponsored an annual will drafting contest in cooperation with the law schools of Duke University, University of North Carolina, and Wake Forest College. All students who are enrolled in these respective law schools, but who are not practicing or who have not actively practiced law, are eligible to participate. Two hundred dollars is awarded to the first-place winner and one hundred dollars to the second-place winner.

EDWIN P. FRIEDBERG AWARD

Edwin P. Friedberg, a member of the Raleigh bar, awards annually a copy of the Commerce Clearing House Standard Federal Tax Reports for the current year to the graduating student who has done the best work in federal taxation while he has been in the Law School.

JAMES F. BYRNES SENATE PRIZE

Delta Theta Phi Foundation, Inc., through the James F. Byrnes Senate, awards each year to that member of the first-year class of the Law School who has completed the work of the first year with the highest scholastic average during the year a cash prize of fifty dollars.

LAWYERS TITLE AWARD

Established in 1954 by the Lawyers Title Insurance Corporation of Richmond, Virginia, this prize of one hundred dollars will be awarded annually to that student attaining the highest average grade in the real property courses: Estates in Land, Conveyancing, and Future Interests.

ORDER OF THE COIF

A chapter of the Order of the Coif, national legal scholarship society, has been established at Duke University School of Law. Its purpose is "to foster a spirit of careful study and to mark in a fitting manner those who have attained a high grade of scholarship." Election is restricted to the ten per cent of the graduating class who have attained the highest rank in their law school work.

WILLIS SMITH PRIZE

The late Willis Smith, for many years a prominent member of the Raleigh bar and Chairman of the Board of Trustees of Duke University, who was serving in the United States Senate at the time of his death, June 26, 1953, provided for over twenty years an annual award to that member of the graduating class of the Law School who had maintained the highest scholastic average during the entire three years of law school work. The prize consisted of a set of valuable books selected by the donor and the Dean. Mr. Smith's family has made arrangements to continue this prize in his memory.

LEGAL FRATERNITIES

Two of the largest national legal fraternities maintain active chapters at the School of Law. The Charles Evans Hughes Inn of Phi Delta Phi International Legal Fraternity was founded at the School of Law in 1931. In 1947 the James F. Byrnes Senate of Delta Theta Phi Law Fraternity was installed at the School. Both fraternities seek to further professional standards. Students may be elected to membership at any time following their first full semester of law study. During the school year the fraternities sponsor separate programs of luncheons featuring prominent local speakers from the profession, an annual address by an attorney of national prominence, and occasional social functions.

RECREATIONAL FACILITIES

The University is located about two miles from the business district of Durham on wooded hills constituting part of the five-thousand-acre Duke Forest, which is maintained by the School of Forestry. Within a short distance from the campus are facilities for golf, horseback riding, and woodland hiking. Students of the Law School are entitled to the use of the University gymnasium, tennis courts, swimming pool, and similar privileges without cost. Motion pictures are shown in Page Auditorium twice a week, and concert programs, recitals, lectures, and plays are presented frequently.

Program of Instruction



THE program of instruction of the School of Law has been thoroughly revised as a result of studies made by the Faculty. The curriculum had become overcrowded. For years new courses have been added at this and other schools as new fields of law have become important; old courses have been retained. Students who wished to specialize in particular fields often found it necessary to omit some of the older, more fundamental courses. Insufficient attention had been given to legal writing, the drafting of legal instruments, and legal planning.

The newly adopted curriculum is designed to insure that students may prepare to specialize in practice without foregoing any part of the basic legal education required for general practice and desirable for all specialists. Courses have been combined; duplications in courses have been eliminated. The larger part of students' third year has been opened for studies of specialties. New courses and seminars have been added, especially in the third year in which teaching methods will be different from those used in the older courses. In these courses and seminars legal writing and drafting and legal planning will be emphasized.

The courses offered are listed below. They are grouped under three headings: First-Year Program, Second-Year Program, and Third-Year Courses. At page 31 the individual courses are described; in that section of the Bulletin they are grouped under the following headings: Business Courses; Property Courses; Public Law Courses; General Courses; Procedure and Practice Courses.

THE FIRST-YEAR PROGRAM is prescribed. It includes basic courses in the fields of contracts, business associations, property (including sales and other chattel transactions), and torts. These courses serve also to acquaint the student with the nature of the judicial process (which is stressed in Chattel Transactions), the court system and court procedure (stressed in Torts), and legal history (stressed in the property course and in other courses). In the field of public law, legislation and the legislative process are studied in the first semester; criminal law and procedure is given throughout the year. A course in research and writing (which is continued through the first semester of the second year), after consideration of how the law is found in law books, trains students in writing memoranda of law and legal arguments and in drafting legal documents; the course emphasizes, for

each student, the law of the state in which he intends to practice, and introduces students to the art of legal planning. It includes the preparation of briefs and the arguing of moot court cases.

The SECOND-YEAR PROGRAM comprises nearly all the other basic courses which all students need regardless of what kind of law practice they plan to enter and the courses prerequisite to third-year work in special fields and in legal planning. Third-year courses may be substituted for non-required courses in this program upon approval of the instructor. The research and writing course continues through the fall semester. The basic work in property and business associations is completed. In the field of business transactions, the students study negotiable instruments and security. A course in federal income taxation, basic to advanced third-year work for specialists, adequately covers the subject for students not planning to specialize in it. Legal and equitable remedies, and court procedure in civil cases, are studied in the course in remedies. Students continue their study of public law in courses in constitutional and administrative law.

THE THIRD-YEAR COURSES (of which an aggregate of 10 to 15 hours each semester is to be selected by each student) are designed to emphasize legal planning and drafting and to enable students to equip themselves to specialize in particular fields. The faculty recommends that all student complete their basic legal education by taking courses in evidence and legal ethics. There are also fundamental courses in legal history and jurisprudence and in conflict of laws and international law. The rest of the third-year courses are in specialties; they are grouped below under the headings (1) business (including advanced corporation law), (2) estates, family, and property, (3) procedure, practice, and local law, and (4) public law (including labor law and taxation). A number of these specialty courses (those preceded by asterisks in the list below) emphasize legal planning and drafting. Each student is required to include two of these courses in his third-year program; enrollment in each is limited.

The First-Year Program

	SEMESTER HOURS	
	Fall	Spring
Chattel Transactions	2	2
Contracts	4	2
Criminal Law and Procedure	2	2
Research and Writing I	1	1
Torts and Introduction to Procedure	3	3
Legislation	3	
Business Associations I		2
Estates in Land		3
	—	—
	15	15

The Recommended Second-Year Program

	SEMESTER HOURS	
	Fall	Spring
Civil Procedure [Required]	3	2
Constitutional Law and Federal Courts [Required]	3	2
Research and Writing II [Required]	1	
Administrative Law [Required]		3
Business Associations II	3	
Conveyancing	3	
Restitution and Equitable Remedies		2
Negotiable Instruments	2	
Security		3
Federal Taxation I		3
	15	15

Substitutions of third-year courses for non-required second-year courses may be made with permission of the instructors in the former. Third-year courses suitable for study in the second year are Family Law, Insurance, Labor Relations, Trusts, and Wills. A student omitting a second-year course from his second-year program may find himself unable to take that course in his third year because it and a third-year course he wishes to take may be scheduled at the same hour.

The Third-Year Courses

Students are to select courses aggregating 10 to 15 hours each semester. Every student must select two of the starred courses listed under "B. Specialties." These courses emphasize legal planning and drafting. Enrollment in each of them except Legal Aid Clinic is limited to 15. Legal Aid Clinic counts as a single starred course, though it is a year course. No student may take more than two starred courses in the same semester without the consent of the Dean and of the instructors in the starred courses involved.

A. ADVANCED COURSES

Conflict of Laws	3
International Law	3
Jurisprudence	3
Legal History	2

B. SPECIALITIES

I. Business (See also "IV. Public Law.")

*Corporate Planning and Drafting	2
Insurance	2
Debtors' Estates	3
*Advanced Legal Accounting (Not Offered 1955-1956)	2
*Securities Regulation (Not Offered 1954-1955)	2

II. Estates, Family, Property

Family Law	2
Future Interests	3
Trusts	3
Family Law Seminar	2
*Tax and Estate Planning	2
Wills and Administration of Estates	3

III. Procedure, Practice and Local Law		
Evidence	2	2
*Legal Aid Clinic	2	2
*Case Studies	1	
North Carolina Statutes and Decisions	2	
Legal Ethics		1
North Carolina Practice		2
IV. Public Law		
Federal Taxation II	3	
Labor Relations	3	
Municipal Corporations (Not offered 1954-55)	2	
*Constitutional Law and Federal Courts Seminar (Not Offered 1954-55)		2
*Labor Law Seminar		2
Labor Standards		2
*Public Regulation of Business Seminar		3
State Taxation		2
*Tax and Estate Planning		2

Description of Courses



Business Courses

ADVANCED LEGAL ACCOUNTING. The study and analysis, in more detail than in Business Associations II, of the balance sheet, the income statement, and the accountancy concepts and principles that serve as controls over corporate distributions; financial reporting and investor protection; trust and estate accounting; and some problems in accounting with respect to public utility regulations. Two hours a week second semester. (Not Offered 1955-56.)

MR. LATTY

BUSINESS ASSOCIATIONS I. Legal principles concerning association in business by agency, partnership, other unincorporated forms and corporations. Creation, form and nature of agency, partnership and corporation, corporate existence (de factor corporations, corporate entity and its limitations), powers, duties, liabilities and compensation of agents, partners, officers and directors, risks in conduct of business by representatives (vicarious liability in tort, authority to contract), imputation of notice and knowledge, scope of enterprise (*ultra vires*), revocation and termination of authority, ratification, undisclosed business associates, stability of the associational relationship. The purpose of this course is to grasp basic principles of Agency and Partnership and elementary doctrines of corporation law as a foundation for the advanced corporation course (Business Associations II). Two hours a week second semester.

MR. LATTY

BUSINESS ASSOCIATIONS II. Promoters, subscription to and issue of shares, stock structure and corporate capital, dividends, preferred stock, bonds, capital increases and reduction, corporate re-acquisition of own stock, elementary principles of corporate accounting, public issue of securities, stock transfers, fundamental corporate changes (recapitalization, sale, merger and consolidation, dissolution), stockholders' suits, and certain principles concerning management and operation not studied in Business Associations I. Three hours a week first semester.

MR. LATTY

CONTRACTS. The formation and legal operation of contracts in general, with attention to problems of drafting and counseling as well as of litigation and extrajudicial settlement. Legal and equitable remedies in contract cases, including damages, specific performance, and restitutionary remedies, and important procedural devices incident to such remedies. Four hours a week first semester, two hours a week second semester.

MR. STANSBURY

CORPORATE PLANNING AND DRAFTING. The student is given hypothetical corporate problems (perhaps taken from the practicing lawyer's desk) on a client's proposed course of action; each problem is designed to require the student to grasp the business situation and goals involved, analyze for pertinent legal principles, plan the transaction to avoid legal and business (including taxation) pitfalls, plan the requisite steps to consummate the desired transaction, draft the appropriate papers and present his research. Two hours a week first semester.

MR. LATTY

SECURITY. Contracts of accommodation, including those on bills and notes, contracts of suretyship and guaranty, letters of credit. Mortgages and security interests in real property, chattel mortgages, pledges, trust receipts, conditional sales and consignment contracts. Three hours a week second semester.

MR. SHIMM

DEBTORS' ESTATES. Rights of creditor and debtor in the administration of insolvent estates in bankruptcy, with comparisons to alternative methods of administration: compositions, assignments for the benefit of creditors, receiverships, and

special proceedings for certain classes of debtors. An introduction to proceedings for the rehabilitation of debtors under the Bankruptcy Act, including arrangements and reorganization. Three hours a week first semester. MR. SHIMM

INSURANCE. The nature of "insurance"; state supervision and control; types of insurance organization; the legal requirement of insurable interest; interest of others than the named insured; the measure of indemnity and subrogation; the beneficiary's interest in life insurance; the insured event, and excepted causes; warranties, representations and concealment; the making of insurance contracts; waiver, estoppel and election. Two hours a week first semester. TO BE ANNOUNCED

NEGOTIABLE INSTRUMENTS. Negotiability of bills and notes; execution of negotiable instruments; obligations of parties; formal requisites of negotiability; transfer and negotiation; requisites of holding in due course; equities and defenses; discharge. Two hours a week second semester. MR. SHIMM

PUBLIC REGULATION OF BUSINESS SEMINAR. See Public Law Courses, page 33 for description. Three hours a week second semester.

MR. LIVENGOD AND MEMBERS OF THE ECONOMICS DEPARTMENT STAFF

SECURITIES REGULATION. Regulation of distribution and marketing of securities and protection of the investor under the Securities Act of 1933, the Securities and Exchange Act of 1934, the Public Utility Holding Company Act of 1935 and the Trust Indenture Act of 1939, with summary treatment of other related federal legislation; the role of the Securities and Exchange Commission; a brief survey of state regulation. Considerable emphasis is placed on civil liabilities under the federal legislation. Two hours a week second semester. (Not offered 1954-55.)

MR. LATTY

Property Courses

CHATTEL TRANSACTIONS. The course covers most of the topics generally treated under the heading of Personal Property, Bailment and Sales; application of the concepts of possession and title in the law of personal property; the bailment relationship; artisan's lien; transfer of chattels by gift, sale and miscellaneous inter vivos transactions. In Sales, the emphasis is on remedies and performance. Special attention is given to the judicial process and technique. Problems of chattel mortgages, pledges and sales financing are considered only incidentally, their general treatment being reserved for the course in Credit Transactions. Two hours a week throughout the year.

MR. LATTY

CONVEYANCING. Form and execution of deeds, description in deeds; rents, licenses, easements and profits; covenants and agreements running with the land at law and in equity; estoppel by deed; recording and title registration; aspects of public control of land use. Three hours a week first semester.

MR. BOLICH

ESTATES IN LAND. Historical introduction to real property with a detailed consideration in the modern law of possessory estates, including the fee simple, the fee tail, the life estate, the estate for years, and other non-freeholds; concurrent ownership; incidents of possessory ownership relative to water, lateral and sub-jacent support and air. Three hours a week second semester.

MR. BOLICH

FUTURE INTERESTS. Future interests in real and personal property; reversions; vested and contingent remainders; executory interests; rights of entry; possibilities of reverter; gifts to classes; powers; perpetuities; construction of wills and deeds as affecting the validity and characteristics of the interests created thereby. Three hours a week first semester.

MR. BOLICH

TAX AND ESTATE PLANNING. Seminar devoted to problems and techniques of tax and estate planning. Federal Taxation I and Federal Taxation II and Future Interests are prerequisite to enrollment in the seminar. Two hours a week second semester.

MR. BOLICH AND MR. LOWNDES

TRUSTS. The nature, creation and elements of a trust; transfer of the beneficiary's interest; administration of trusts; termination and modification of trusts; charitable trusts; liabilities to third persons; and liabilities of third persons. Three hours a week first semester. MR. LOWNDES

WILLS AND ADMINISTRATION OF ESTATES. Descent and distribution; property rights of surviving spouse; children and descendants; ancestors and collaterals; effect of claimant's misconduct. Making and revoking wills; testamentary capacity; execution of wills; holographic and special types; integration; testamentary character and intent; revocation; operation of legacies and devices. Probate and administration; grant of administration; probate and contest of wills; assets; contracts, sales and investments by personal representative; claims; settlement of the estate. Three hours a week second semester. MR. McCLAIN

Public Law Courses

ADMINISTRATIVE LAW. The formulation of statutory schemes of administrative regulation; the organization of administrative agencies; the determination, promulgation and enforcement of administrative programs; the respective spheres of administrative and judicial responsibility; judicial control over administrative action. Practice and procedure before administrative agencies; informal conferences and negotiations; formal hearings; constitutional limitations. Three hours a week second semester. MR. KRAMER

CONSTITUTIONAL LAW AND FEDERAL COURTS. Judicial protection against arbitrary governmental action; the history of the concept of a "higher law"; the constitutional clauses relied upon. The organization and jurisdiction of the federal courts; when and how judicial review can be invoked; limitations on governmental power with respect of economic matters, civil liberties and criminal and civil procedure. The powers of Congress, express and implied; limitations on State governmental powers resulting from the existence and from the exercise of Congressional powers. The constitutional questions involved in administrative law, conflict of laws, intergovernmental tax immunities, jurisdiction to tax, and state taxation of interstate commerce are covered more fully in other courses. Three hours a week first semester, two hours a week second semester. MR. MAGGS

CONSTITUTIONAL LAW AND FEDERAL COURTS SEMINAR. Advanced study of current Supreme Court cases and of particular fields in constitutional law and history and in federal court organization. Two hours a week second semester. (Not offered 1954-55.) MR. MAGGS

CRIMINAL LAW AND PROCEDURE. An introductory study of the law of crimes and the administration of criminal justice; analysis of the criminal act and the mental element in crime; consideration of specific offenses as defined by statute and the common law; discussion of typical defenses in relation to specific crimes; elementary criminal procedure; study of the Anglo-American penal system. Two hours a week throughout the year. MR. McCLAIN

FEDERAL TAXATION I. An introduction to the federal taxation with particular emphasis on the federal income tax. The course is designed as a final course for students who do not intend to specialize in tax practice and as an introductory course for those who do. Three hours a week second semester. MR. LOWNDES

FEDERAL TAXATION II. A more advanced course in federal taxation. The principal emphasis of the course is on the federal estate and gift taxes, and the relation of those taxes to the federal income tax. Three hours a week first semester. MR. LOWNDES

INTERNATIONAL LAW. A survey of public international law of peace, as evidenced especially in decisions of national and of international courts; the drafting and interpretation of treaties; the nature and handling of international claims; the organization and jurisdiction of international tribunals, with special reference to the International Court of Justice; developments with respect to the codification of the law. Three hours a week second semester. MR. WILSON

LABOR LAW SEMINAR. An intensive examination of significant problems in collective bargaining, union-management relations and labor dispute settlement, with emphasis upon the drafting and interpretation of contract clauses, theories and techniques in contract negotiation and grievance handling, voluntary arbitration and other procedures for the adjustment of disputes, and the interrelation of the legal and economic aspects of labor problems. Prerequisite: Labor Relations. Two hours a week second semester. MR. LIVENGOOD

LABOR RELATIONS. A study of the law relating to collective bargaining and concerted labor activities, including the National Labor Relations Act and related legislation, the legal aspects of strikes, boycotts and picketing, the negotiation and administration of collective bargaining agreements, procedures for the settlement of labor disputes, and relations between the union and individual employees. Three hours a week first semester. MR. LIVENGOOD

LABOR STANDARDS. Government regulation of conditions of employment, including the Fair Labor Standards Act and other wage-hour and child-labor statutes, unemployment insurance and other social security legislation, employers' liability and workmen's compensation acts, and related laws establishing minimum standards for the creation, continuance and termination of the employment relationship. Two hours a week second semester. MR. LIVENGOOD

LEGISLATION. A general introduction to the field of Public Law, including, among others, the following topics: organization, techniques, procedures, and problems of legislative bodies; formulation of legislative policies; and drafting and interpretation of statutes. Three hours a week first semester. MR. LIVENGOOD

MUNICIPAL CORPORATIONS. The nature of municipal corporations; their external constitution; their internal constitution; their powers; their liabilities; remedies for and against municipal corporations. Two hours a week first semester. (Not offered 1954-55.) TO BE ANNOUNCED

PUBLIC REGULATION OF BUSINESS SEMINAR. Intensive study of the federal antitrust laws and their common-law background, with emphasis on the economic policies involved. As a corollary of critical examination of the Sherman Act, Clayton Act, Federal Trade Commission Act and related legislation designed to enforce competition as the primary control of the economic system, some consideration is given to legal measures which supplement or replace competition, such as direct regulation of business and government intervention by public loans, guaranties and ownership. Three hours a week second semester.

MR. LIVENGOOD AND MEMBERS OF THE ECONOMICS DEPARTMENT STAFF

STATE TAXATION. Constitutional limitations on the taxing power; jurisdiction to tax; state excise taxes; and the general property tax. Two hours a week second semester. MR. LOWNDES

TAX AND ESTATE PLANNING. See Property Courses, page 32, for description. Two hours a week second semester. MR. BOLICH AND MR. LOWNDES

General Courses

CONFLICT OF LAWS. A study of the special problems which arise when the significant facts of a case are connected with more than one jurisdiction. Recognition and effect of foreign judgments; choice of law; federal courts and conflict of laws; the United States Constitution and conflict of laws. Three hours a week second semester. MR. KRAMER

FAMILY LAW. A seminar approach to the cases, statutes, and sociological theories covering the contract to marry, its formation and breach; marriage; annulment; divorce; separation; property rights; and international jurisdiction. Selected materials. Two hours a week first semester. MR. BRADWAY

SEMINAR IN FAMILY LAW. A seminar approach to the efforts of the social sciences, including the law, to deal with the intricate and perplexing problems of the modern family. Readings are assigned in legal and sociological material. Class

discussions are based upon some central topic, such as divorce, domestic relations courts, etc. Written reports required in lieu of an examination. Family Law is prerequisite. Two hours a week second semester.

MR. BRADWAY

JURISPRUDENCE. Discussion of some of the basic problems of classical and contemporary juristic theory, with applications to cases and statutes. Open to all graduate students, and, with the consent of the instructor, to qualified second and third year students. Three hours a week first semester.

MR. KRAMER

LEGAL HISTORY. A study of the development of fundamental English and American legal institutions, with primary emphasis upon the establishment and growth of American law from the colonial period to the present. Two hours a week second semester.

MR. BOLICH

NORTH CAROLINA STATUTES AND DECISIONS. A study of selected statutes of North Carolina with discussion of their application, and an analysis of the decisions of the Supreme Court of North Carolina construing them. Two hours a week first semester.

MR. BRYSON

RESTITUTION AND EQUITABLE REMEDIES. A survey of equitable remedies in general (including enforcement of equity decrees) and of important parts of the fields of equity and restitution that are not covered in other courses. Two hours a week second semester.

TO BE ANNOUNCED

TORTS AND INTRODUCTION TO PROCEDURE. The bases of liability in damages for personal injuries and injuries to property; bases other than fault; negligence; intentional infliction of harm. Procedure in jury trials; proof of negligence; causation and "proximate cause"; defenses; the damages recoverable and equitable relief obtainable. Special rules applicable to occupiers and owners of land, motor vehicle accidents, suppliers of goods and remote contractors. Misrepresentation and fraud; defamation; assault and battery; false imprisonment. Three hours a week throughout the year.

MR. MAGGS

Procedure and Practice Courses

CASE STUDIES. Detailed analysis of an important civil suit, under supervision of a visiting instructor who was counsel therein. The instructor's files and the record and briefs will be studied. Consideration will be given to how the matter first arose and what business or other problems of the client were involved; how counsel first analyzed the matter and how he ascertained relevant facts; how counsel prepared for and conducted the trial and appellate proceedings. One hour a week first semester.

INSTRUCTOR TO BE ANNOUNCED

CIVIL PROCEDURE. A study of modern methods of pleading (including Federal Rules of Civil Procedure) and their relationship to the historical developments insofar as such developments affect or explain present-day rules; also a treatment of real party in interest, joinder of parties, joinder of causes of action, counterclaims, objections to pleadings, amendment to pleadings, and summary disposition of cases. Special emphasis is placed on trial and appellate practice. Three hours a week first semester, two hours a week second semester.

TO BE ANNOUNCED

EVIDENCE. Examination of witnesses; admission and exclusion; competency of witnesses; privilege; relevancy; demonstrative evidence; writings; the hearsay rule and exceptions thereto; the burden of producing evidence; presumptions; the burden of persuasion; judicial notice. Two hours a week throughout the year.

MR. STANSBURY

LEGAL AID CLINIC. This course is designed to develop in the student self-confidence and the professional habit of handling his cases in a methodical manner. During the first semester the student learns to: interview a client in an orderly manner, determine the gaps in the client's story and filling in these gaps with information from other proper sources; evaluate facts; make a record of facts including the documents used for the purpose; diagnose a case for legal "symptoms" and develop legal theories; organize research; plan a campaign at law. The class becomes familiar with the courthouse as a source of facts; and with a law office

as a place in which a lawyer functions. Special exercises like searching a title to real estate, preparing a criminal case for trial, are assigned. During the second semester the student learns to conclude a case in an orderly professional manner by education; by conciliation; by litigation. The climax is a jury trial with expert witnesses. The students operate under the supervision of a staff member throughout the year. Students are assigned to duty in rotation in the Legal Aid Clinic office and in the downtown office. This gives them a chance to interview flesh and blood clients and to see the progress of real cases. By preparing trial briefs in court and criminal cases the student learns how to get ready for his appearance in the court room. Two hours a week throughout the year. MR. BRADWAY

LEGAL ETHICS. A seminar approach to the ethical problems of the lawyer and the profession. Readings are assigned in legal biography, law reform, the history of the profession, legal aid work. Class discussions cover canons of ethics, statutes, cases, and opinions of grievance committees dealing with the daily problems of the practicing lawyer. A written report is required on some phase of the reform of the administration of justice. One hour a week second semester MR. BRADWAY

NORTH CAROLINA PRACTICE. A study of the steps in an action at law from the issuance of process to the entry of final judgment including service of process; appearance and waiver of process; selecting the jury; various motions made during the trial; submission of case to jury; verdict; judgment; noting and perfecting appeal. Also included are such topics as jurisdiction of various courts in North Carolina; venue; trials without a jury; provisional remedies and special proceedings. Two hours a week second semester. MR. BRYSON

Legal Research and Writing

RESEARCH AND WRITING I. Classroom instruction and individual problems in the use of law books, the preparation of memoranda of law, and moot court briefing and argument. The first year of a two-year program designed to familiarize the student with the materials and methods of legal research and legal writing. Two semester-hours credit. MESSRS. STANSBURY, BRYSON, AND BRADWAY

RESEARCH AND WRITING II. The second year of the two-year program of research and writing. In addition to more advanced work of the kind involved in the first-year program, the student will assist in evaluating the work of first-year students and in judging first-year moot court arguments. Required of all second-year students. One semester-hour credit. MESSRS. STANSBURY, BRYSON, AND BRADWAY

Upon recommendation of the Committee on Graduate Study, seminars not listed in the Bulletin may be created or arrangements made for supervision of special research by individual graduate students in any subject.

All matters presented in this Bulletin are subject to change as the University or the School of Law may deem expedient.

Enrollment 1953-1954



First Year

Allard, David Henry (Whitman College), Yakima, Washington
Atkins, James Harrison (Duke University), Gastonia, North Carolina
Bernard, Harold, Jr. (Duke University), Johnstown, Pennsylvania
Branham, William Dennis (Duke University), Rocky Mount, North Carolina
Brennan, David Richard (Duke University), Arlington, Virginia
Bundschu, William Blanton (Duke University), Independence, Missouri
Burdman, Bertram Richard (Youngstown College), Youngstown, Ohio
Butrym, Robert Earl (Duke University), McKeesport, Pennsylvania
Cassedy, Marshall Royal (Hobart College), Short Hills, New Jersey
Caudle, Lloyd Cameron (Duke University), Clemmons, North Carolina
Cheney, Paul Northcott (University of North Carolina), Salisbury, North Carolina
Culpepper, John Shepard, Jr. (University of Tennessee), Jacksonville, Florida
Dillard, John Marshall (Furman University), Greenville, South Carolina
Dorkin, Frederic Eugene (Dartmouth College), Bridgeport, Connecticut
Eldridge, William Butler (Duke University), Durham, North Carolina
Euliss, Ray Cooper (Elon College), Burlington, North Carolina
Evans, Paul Vernon (Colorado College), Colorado Springs, Colorado
Felts, Robert Lee (Sacramento State College), Durham, North Carolina
Fisher, Kenneth Howard (Marshall College), Kenova, West Virginia
Gibbons, Gerald Robert (Duke University), Utica, New York
Greenglass, Herman Alfred (Duke University), Miami Beach, Florida
Greer, Dewey Hobson, Jr. (Duke University), High Point, North Carolina
Grigg, William Humphrey (Duke University), Albemarle, North Carolina
Hall, Vincent Thomas (Duke University), Miami, Florida
Hambleton, Ernest Edward, Jr. (Duke University), Buffalo, New York
Hamilton, John Dickson, Jr. (Miami University), Dayton, Ohio
Harris, Elisha Carter (Duke University), Durham, North Carolina
Heffner, Frederick Howard (State Teachers College), Fleetwood, Pennsylvania
Johnston, John Devereaux, Jr. (Duke University), Asheville, North Carolina
Josey, Claude Kitchen (U. S. Military Academy), Scotland Neck, North Carolina
Kortepeter, Paul Frederick (Harvard University), Southport, Indiana
Lawther, John Wheeler (Duke University), Bethesda, Maryland
McKee, Duncan Oliphant (College of Wooster), Lawrenceville, New Jersey
Magidoff, Jerome (Duke University), Brooklyn, New York
Marks, William Fry (Gettysburg College), Danville, Pennsylvania
Mays, Alfred Raymond (Kent State University), Cleveland, Ohio
Michielli, James Allen (Hofstra College), Hempstead, New York
Neely, John Starr, Jr. (Duke University), Rutherfordton, North Carolina
Pinger, Daniel Collins (Rollins College), Cincinnati, Ohio
Reed, John Alton (Duke University), Washington, D. C.
Reeves, Ernest Gene (Duke University), Chattanooga, Tennessee
Richardson, Donald John (Duke University), Syracuse, New York
Robinson, Russell Marable II (Duke University), Charlotte, North Carolina
Robinson, William B. Rodman (Columbia University), Charlotte, North Carolina
Rose, Carl Preston (Duke University), Rocky Mount, North Carolina
Scheman, Robert Bernard (Duke University), New York, New York
Schwartz, Ronald Muni (Duke University), Stamford, Connecticut
Semon, William Peter (Duke University), Manhasset, New York
Shankweiler, Richard Thomas (University of Miami), Wilmington, Delaware
Stahl, Frederick Andrew (Duke University), Manhasset, New York
Stein, Gary Saul (Duke University), Irvington, New Jersey
Strickland, Donald Bennett (Duke University), Rich Square, North Carolina
Tallant, David, Jr. (Claremont Men's College), River Forest, Illinois
Terry, Charles Robert (East Tennessee State College), Bulls Gap, Tennessee
True, Joel Brundage, Jr. (Duke University), Springfield, Tennessee

Second Year

Bell, William Goebel (Duke University), Carrollton, Kentucky
Bowen, Trent Calvin (Wake Forest Law School), Durham, North Carolina
Boyd, Melvin Thomas (Duke University), Henderson, North Carolina
Campbell, Forrest Edwin (University of Portland), Dunn, North Carolina
Carnahan, John Anderson (Duke University), Cleveland Heights, Ohio
Cates, Jerry H. (Duke University), Richmond, Virginia

Coleman, John William (Duke University), Arlington, Virginia
 Cummings, Alton Tunnell (Duke University), Asheboro, North Carolina
 Franzblau, Sidney Myron (Muhlenberg College), Newark, New Jersey
 Friedrich, John Peter (Colgate University), Fayetteville, New York
 Goodwin, David Coburn (Harvard University), Miami Beach, Florida
 Hahn, Raymon Jenkin (Duke University), Pensacola, Florida
 Halberstadter, Sanford Ira (Rutgers University), Elizabeth, New Jersey
 Hart, Janet Olive (Swarthmore College), Durham, North Carolina
 Kuffner, John Frederick (Ohio University), St. Marys, Ohio
 Mitchell, Donald Walcutt (Duke University), Summit, New Jersey
 Reynolds, Joseph Charles (Duke University), Asheville, North Carolina
 Sellars, Bayard Bellamy (University of California at L.A.), Durham, North Carolina
 Shapiro, David (Tufts College), Brooklyn, New York
 Snyder, Theodore Allen, Jr. (University of Chicago), Walhalla, South Carolina
 Steffey, Fred Henry (Duke University), Durham, North Carolina
 Swanson, Edward Nathaniel (Duke University), Pilot Mountain, North Carolina
 Walker, Clarence Wesley (Duke University), Durham, North Carolina
 Wilkins, Roland Robert (Albion College), Decatur, Georgia
 Woolard, William Leon (Duke University), Pinetown, North Carolina

Third Year

Anderson, Eugene Moore, Jr. (Washington & Lee School of Law), Spartanburg, South Carolina
 Baylog, Richard Louis (Kent State University), Cleveland, Ohio
 Biddison, Mark (Duke University), New York, New York
 Booker, Frank Edwin (Southeast Missouri State College), Cape Girardeau, Missouri
 Brooks, Sidney Barclay (Duke University), Wilson, North Carolina
 Calloway, Vern Daniel, Jr. (Duke University), Durham, North Carolina
 Clark, Seymour Garland, Jr. (Duke University), Brooklyn, New York
 Curran, Marshall Glenn, Jr. (College of Wooster), New Castle, Pennsylvania
 Davis, Robert Earl (Duke University), Portsmouth, Virginia
 Gibson, Harold Eugene, Jr. (Duke University), Kenton, Ohio
 Gordon, Abraham Isidore (University of Bridgeport), Bridgeport, Connecticut
 Hardin, Paul, III (Duke University), Birmingham, Alabama
 Harris, Charles Anthony (Duke University), Cheraw, South Carolina
 Hunter, Eugene Grigg, Jr. (Duke University), Kingsport, Tennessee
 Johnston, Hugh Wolfe (Duke University), Cramerton, North Carolina
 Kaelin, William George (Duke University), East Rockaway, New York
 Kelly, Walter Richard, Jr. (Duke University), Cherryville, North Carolina
 Keziah, Sanford Perry (Duke University), High Point, North Carolina
 McFadden, Robert Lawrence (Duke University), Rock Hill, South Carolina
 Mast, Everett Leo (Western Carolina Teachers College), Sugar Grove, North Carolina
 Maxwell, John Wallace (Duke University), Bethesda, Maryland
 Olive, Leon (University of Alabama), Durham, North Carolina
 Rosenberg, Marvin (University of Richmond), Jamaica, New York
 Rushing, Charles Evan (Augustana College), Moline, Illinois
 Sarazen, John Carl (Duke University), White Plains, New York
 Shull, Joseph Roger (Duke University), Bridgeport, Connecticut
 Smith, Bill Lee (Juniata College), Fayette City, Pennsylvania
 Street, John Scott, Jr. (Duke University), Chillicothe, Ohio
 Stride, Richard Joseph (Duke University), Saco, Maine
 Swanstrom, John Eric (Clark University), Worcester, Massachusetts
 Williams, Donald Eugene (Muskingum College), Enon Valley, Pennsylvania
 Wood, Charles Barnett (University of North Carolina), Roxboro, North Carolina
 Woolard, Frazier Thomas (College of William & Mary), Washington, North Carolina
 Young, James Frank (Duke University), Havertown, Pennsylvania

Graduate Students

Baade, Hans W. (Syracuse University, University of Kiel), Forest Hills, New York
 Faris, Eron McGruder, Jr. (Washington & Lee University, Washington & Lee School of Law), Lexington, Virginia
 Hudspeth, George Lee (Texas Christian University, Duke University School of Law), Yadkinville, North Carolina
 Powers, Leonard Stewart (Duke University, University of North Carolina School of Law), Wake Forest, North Carolina
 Stevens, David Boyette (University of North Carolina, U. of North Carolina School of Law), Durham, North Carolina

Unclassified Student

Vickers, Claude Wallace (University of North Carolina), Durham, North Carolina

Duke University School of Law

Publishes

Law and Contemporary Problems

Each issue of this publication is devoted to a symposium exploring not only the legal but also the economic and other social-science aspects of current problems that cross the lawyer's desk.

Symposiums published or to be published in 1954 include

The Loan Shark Problem Today

The Protection of Literary and Artistic
Property

The Regulation of Natural Gas

Price Control in a Cold War



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Law and Contemporary Problems

DUKE STATION

DURHAM, N. C.

BULLETIN
OF
DUKE UNIVERSITY



The School of Nursing
The Division of Nursing Education

ANNOUNCEMENTS FOR 1954-1955

Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

For BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

For BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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BULLETIN
OF
DUKE UNIVERSITY

THE SCHOOL OF NURSING



1954-55

DURHAM, NORTH CAROLINA
1954

Contents



	PAGE
CALENDAR OF THE SCHOOL OF NURSING AND THE COLLEGES.....	3
THE SCHOOL OF NURSING.....	5
OFFICERS OF ADMINISTRATION.....	8
INSTRUCTIONAL STAFF.....	10
ADMISSION.....	11
FINANCIAL INFORMATION AND LIVING ACCOMMODATIONS.....	14
THE SUMMER SESSION.....	17
GENERAL REGULATIONS.....	18
SCHOOL OF NURSING ALUMNAE ASSOCIATION.....	21
SANTA FILOMENA.....	22
AWARDS TO NURSES.....	23
REQUIREMENTS FOR DEGREES IN NURSING.....	24
DIVISION OF NURSING EDUCATION.....	35
PROGRAM IN PSYCHIATRIC NURSING.....	40
PROGRAM IN MEDICAL AND SURGICAL NURSING.....	41
CLINICAL PROGRAM IN OPERATING ROOM NURSING.....	42

Calendar of the School of Nursing and the Colleges



SUMMER TERM OF THE SCHOOL OF NURSING AND SUMMER SESSION OF DUKE UNIVERSITY

1954

- May 31—Monday. Clinical Instruction and practice begins for Summer Term for pre-registered students in School of Nursing.
- June 6—Sunday. Dormitories open for new students with advanced standing and First Year Diploma students.
- June 6—Sunday, 7:30. Orientation begins for new students with advanced standing and first year diploma students.
- June 8—Tuesday. Instruction begins in School of Nursing.
- June 9—Wednesday. Registration for students with advanced standing and all pre-registered students in Summer Session.
- June 10—Thursday. Instruction begins in Summer Session.
- June 12—Saturday. All Summer Session classes meet.
- June 13—Sunday. Moving up Day.
- July 16-17—Friday-Saturday. Final examinations for first term.
- July 19—Monday. Instruction begins in School of Nursing.

The Academic Year 1954-55

1954

- September 16—Thursday, 7:30 P.M. Assembly for all entering freshmen and new students with advanced standing.
- September 20—Monday. Clinical instruction and practice begin for Fall Term.
- September 21—Tuesday. Registration and matriculation of new students with advanced standing, Woman's College.
- September 22—Wednesday. Final registration of pre-registered students.
- September 23—Thursday. Fall semester classes begin.
- November 8—Monday. Last day for reporting mid-semester grades.
- November 25—Thursday. Holiday—School of Nursing.
- December 11—Saturday. Founders' Day
- December 18—Saturday, 12:30 P.M. Christmas recess begins for Colleges and scheduled vacations in School of Nursing.

1955

- January 3—Monday, 8:00 A.M. Classes resumed.
- January 15—Saturday, 12:30 P.M. Fall semester classes end.
- January 18—Tuesday. Final examinations begin.
- January 28—Friday. Final examinations end.
- January 31—Monday. Spring semester classes begin in School of Nursing.
- January 31—Monday. Registration and matriculation of new students.
- February 1—Tuesday. Last day for matriculation for the spring semester.
- February 2—Wednesday. Spring semester classes begin in the Colleges.
- March 16—Wednesday. Last day for reporting mid-semester grades.
- March 26—Saturday, 12:30 P.M. Spring recess begins for scheduled vacations.
- April 4—Monday, 8:00 A.M. Classes are resumed.
- May 20—Friday, 5:00 P.M. Spring semester classes end.
- May 23—Monday. Final examinations begin.
- May 30—Monday. Clinical instruction and practice begins for Summer Term of School of Nursing.
- June 2—Thursday. Final examinations end.
- June 4—Saturday. Commencement begins.
- June 5—Sunday. Commencement Sermon.
- June 6—Monday. Graduating Exercises.

The School of Nursing



THE School of Nursing offers two programs; a three-year program leading to a diploma in Nursing and a four-year program leading to the degree of Bachelor of Science in Nursing. Graduates from these programs are eligible to take the State Board Examination for the title of Registered Nurse. The Division of Nursing Education of Duke University offers to graduate nurses a program leading to the degree of Bachelor of Science in Nursing Education. This division is closely associated with the School of Nursing and the program is described in this bulletin, but admission is through the Woman's College.

The courses leading to the diploma are designed to provide an educational program enabling the students to develop skills, knowledge, and attitudes needed for nursing service in hospitals and homes. Included in the program are experiences in the classroom, in the laboratory, and in Duke Hospital. Students in this program participate in general campus activities and share with other undergraduates opportunities for personal development. Students who wish to work toward the diploma in Nursing must apply for admission to the School of Nursing of Duke University.

Students in the program leading to the degree of Bachelor of Science in Nursing have the opportunity to secure a background of knowledge and appreciation as well as skills and attitudes which aid them in interpreting their experiences in nursing. Included in this program are classroom and laboratory experiences with the students in the colleges and clinical experience in nursing with the students and personnel in Duke Hospital and other community agencies. Students in this program are prepared for nursing in hospitals and home and in public health nursing. Graduate nurses are not admitted to this program. Students who wish to work toward the degree of Bachelor of Science in Nursing apply for admission to the School of Nursing of Duke University.

The program leading to the degree of Bachelor of Science in Nursing Education is planned for nurses holding a diploma in Nursing who wish to prepare themselves as teachers in schools of nursing or administrators in nursing service. Students who wish to work toward the degree of Bachelor of Science in Nursing Education must apply for admission to the Woman's College of Duke University.

The School of Nursing of Duke University was established in 1931 in association with the School of Medicine of the University and Duke

Hospital through the gift of the late James B. Duke. The School of Nursing is a member of the Committee on Health Affairs which promotes the common interests of the Medical School, School of Nursing, and Duke Hospital. A curriculum Committee, appointed by the President with representation from the administration of the University, the undergraduate colleges, the Medical School and the School of Nursing supervises the curriculum of the School of Nursing.

The facilities for instruction include the facilities available in the undergraduate, professional, and graduate schools and colleges of Duke University and the clinical facilities of Duke Hospital and of the North Carolina Cerebral Palsy Hospital. The facilities of the Veterans Hospital in Durham may be made available at some future time.

In a wing of Hanes House are located the administrative offices of the School of Nursing, a large classroom seating 100 people and equipped with audio-visual aids, a small classroom seating 50 people and equipped with a screen and movie projector, a nursing arts laboratory with equipment for nursing practice for sixteen students, a conference room for faculty committees, small discussion groups and student council meetings. The School of Nursing also uses the laboratories of the Medical School for courses in science and classrooms in the hospital for clinical nursing courses.

A reference library of 2,298 books and periodicals of special interest to students majoring in nursing is located in Hanes House. Students may use the general libraries on the East and West Campuses and the Duke Hospital Library. A collection of visual aids including films is being assembled with an index in the library for the use of students and instructors in the School of Nursing.

Duke Hospital has every modern convenience for the diagnosis, proper nursing care, welfare and comfort of the patients including 591 hospital beds, 50 bassinets, a large public out-patient department, a large private diagnostic clinic and offices and examining rooms for the doctors who serve on the staff of the hospital. There are very close relationships established between the hospital and the Health Departments in North Carolina. A system for referral of patients to the nursing service of the Health Departments has been established between the supervisors of the nursing service in the hospital and the nursing service of the Health Department.

The beds in Duke Hospital are assigned to the various services as follows: *Medicine*, including dermatology and neurology, has 77 ward beds; *surgery*, including urology, otolaryngology, ophthalmology, and orthopaedics, 135 ward beds; *obstetrics*, including gynecology, 59, and 50 bassinets; *neuropsychiatry*, 9; and *pediatrics*, 40. There are 209 private rooms and semiprivate cubicles, 12 air-conditioned operating rooms, 4 obstetric delivery rooms. Except for emergencies, all

patients are admitted to the hospital from either the out-patient clinic or the private diagnostic clinic.

The hospital has been approved for internships and residencies by the Council on Medical Education and Hospitals of the American Medical Association.

The out-patient department has an average of 466 visits per day. All services including psychiatry carry on an active program in the out-patient departments. Students are assigned to the out-patient department for at least four weeks during their program in the School of Nursing. The first assignment is in the first year, to give the student some knowledge of the background of her patients; subsequent assignments are made concurrent with the experience on each service.

Officers of Administration



General Administration

ARTHUR HOLLIS EDENS, Ph.D., LL.D. <i>President of the University</i>	West Campus
WILLIAM HANE WANNAMAKER, A.M., Litt.D. <i>Vice-Chancellor of the University</i>	West Campus
PAUL MAGNUS GROSS, Ph.D. <i>Vice-President in the Educational Division and Dean of the University</i>	Hope Valley
CHARLES EDWARD JORDAN, A.B., LL.D. <i>Vice-President in the Division of Public Relations and Secretary of the University</i>	813 Vickers Avenue
HERBERT JAMES HERRING, A.M., LL.D. <i>Vice-President in the Division of Student Life and Dean of Trinity College</i>	Myrtle Drive
ALFRED SMITH BROWER, A.B. <i>Business Manager and Comptroller</i>	614 West Campus
FLORENCE K. WILSON, R.N., M.A. <i>Dean of the School of Nursing</i>	Faculty Apartments

Committee on Health Affairs

W. C. DAVISON, <i>Professor of Pediatrics, and Dean of the School of Medicine.</i>
FLORENCE K. WILSON, <i>Professor of Nursing Education, and Dean of the School of Nursing.</i>
*ROSS PORTER, <i>Professor of Hospital Administration, and Superintendent of Duke Hospital.</i>
LELIA R. CLARK, <i>Professor of Nursing Service.</i>
ANN JACOBANSKY, <i>Assistant Professor of Nursing Education, and Director of Undergraduate Instruction.</i>
EWALD W. BUSSE, <i>Professor of Psychiatry, and Chairman of the Department of Psychiatry.</i>
BAYARD CARTER, <i>Professor of Obstetrics and Gynecology.</i>
W. D. FORBUS, <i>Professor of Pathology.</i>
F. G. HALL, <i>Professor of Physiology.</i>
PHILIP HANDLER, <i>Professor of Biochemistry.</i>
DERYL HART, <i>Professor of Surgery.</i>
J. E. MARKEE, <i>Professor of Anatomy.</i>
K. E. PENROD, <i>Associate Professor of Physiology and Pharmacology and Assistant Dean.</i>
R. J. REEVES, <i>Professor of Radiology.</i>
D. T. SMITH, <i>Professor of Bacteriology.</i>
E. A. STEAD, JR., <i>Professor of Medicine.</i>

Four other members of the faculty holding the rank of Assistant Professor or above by alphabetical rotation.

* Absent on leave, October 1, 1952 to October 1, 1954.

Curriculum Committee for School of Nursing

Chairman: Dean Florence K. Wilson

Educational Administration: Dean Alan Krebs Manchester

Undergraduate Instruction in Nursing: Ann Jacobansky

Professor of Nursing Service: Lelia Clark

Faculty of School of Nursing: Lucy Massey, Thelma Ingles

School of Medicine Preclinical Departments: Haywood Taylor

School of Medicine Clinical Departments: W. W. Shingleton

English: Frank Bowman

Psychology: Norman Garnezy

Division of Nursing Education

ROBERTA FLORENCE BRINKLEY, Ph.D.

Dean of Woman's College

East Campus

MARIANNA JENKINS, Ph.D.

1626 Minerva Avenue

Associate Dean of Undergraduate Instruction, Woman's College

MRS. ELIZABETH ANDERSON PERSONS, A.M.

Director of Admissions, Woman's College

612 Swift Avenue

WILLIAM H. CARTWRIGHT, Ph.D.

Chairman, Department of Education

942 Lambeth Circle

THELMA INGLES, R.N., M.A.

Director, Division of Nursing Education

Poplar Apartments

JOSEPHINE RAPPAPORT, R.N., M.A.

Assistant Professor of Nursing Education

Faculty Apartments

HALINA A. ZUKOWSKI, R.N., M.L.

*Assistant Professor of Nursing Education and Director
of the Program in Advanced Psychiatric Nursing*

918 Monmouth Ave.

Committees

Admissions: L. Massey, Chairman, J. Rappaport, A. Jacobansky, R. Koch, M. Schumacher.

Curriculum: A. Jacobansky, Chairman, L. Clark, B. Arey, L. Massey, J. Wilson, M. Covington.

Guidance: H. Zukowski, Chairman, J. Rappaport, R. Rodgers, R. Hahola, D. Sutherland, R. Koch.

Library: L. Knowles, Chairman, R. Rodgers, M. Campbell, M. Anderson, T. Ingles.

STAFF

MRS. MYRTLE ANDERSON
Librarian

MRS. BETSY POWERS
Records Clerk

MRS. ESTHER MECCA
Secretary to the Faculty

MRS. MURIEL SCHUMACHER
Health Nurse

MRS. CONNIE SMITH
Secretary to the Dean

Instructional Staff



MARGARET BERNADINE AREY, R.N., B.S. <i>Instructor in Pediatric Nursing</i>	2201 Woodrow Street
MARY MILTON CAMPBELL, R.N., B.S.N.E. <i>Instructor in Operating Room Nursing</i>	402 Buchanan Blvd.
LELIA ROSS CLARK, R.N., M.A. <i>Professor of Nursing Service</i>	Poplar Apartments
MARTHA LEE COVINGTON, R.N., B.S.N. <i>Assistant in Nursing Arts</i>	810 Demerius Street
ROSE HELEN HAHOLA, R.N. <i>Instructor in Pediatric Nursing</i>	920 Second Street
THELMA INGLES, R.N., M.A. <i>Assistant Professor of Nursing Education</i>	Poplar Apartments
ANN MADELINE JACOBANSKY, R.N., M.Ed. <i>Assistant Professor of Nursing Education</i>	Westover Park Apartments
EILEEN DOROTHY KIERNAN, R.N., B.S. <i>Instructor in Nursing Prematures</i>	Poplar Apartments
LOIS NINA KNOWLES, R.N., B.S.N. <i>Instructor in Nursing Arts</i>	2201 Woodrow Street
RUTH MAE KOCH, M.S. <i>Assistant Professor of Nursing Education</i>	114 Hanes House
SOPHIA LOUISE KROK, R.N., M.S. <i>Instructor in Medical Nursing</i>	Carolee Apartments
LUCY ETHELYN MASSEY, R.N., M.A. <i>Assistant Professor of Public Health Nursing</i>	Chapel Hill, N. C.
JOSEPHINE RAPPAPORT, R.N., M.A. <i>Assistant Professor of Nursing Education</i>	Faculty Apartments
RACHEL LEE RODGERS, R.N., B.S.N.E. <i>Assistant in Nursing Arts</i>	810 Demerius Street
DOTTYE LOUISE SUTHERLAND, R.N., B.S.N.E. <i>Instructor in Surgical Nursing</i>	University Apartments
FLORENCE K. WILSON, R.N., M.A. <i>Professor of Nursing Education</i>	Faculty Apartments
JENNET MAE WILSON, R.N., B.S.N.E. <i>Instructor in Obstetric Nursing</i>	402 Buchanan Boulevard
HALINA ANN ZUKOWSKI, R.N., M.L. <i>Assistant Professor of Psychiatric Nursing</i>	918 Monmouth Avenue

Instruction in the School of Nursing is given by members of the general faculty and the faculty of the School of Medicine listed in the respective bulletins.

Admission



Application for Admission

A PPLICATIONS for admission to the School of Nursing should be made to the Committee on Admissions of the School of Nursing, Hanes House, Duke University, Durham, N. C. Application forms will be sent on request.

Admission

Applicants may qualify for admission to one of the two programs in the School of Nursing as members of the Freshman Class, as students with advanced standing, or as members of the first year of the diploma program. Since the profession of nursing requires women with a high sense of integrity and responsibility, with culture and intelligence, whose predominant interest is service, the Admissions Committee will select the applicants who, in its opinion, seem best qualified for nursing. The Admissions Committee must have on file the records indicating the fulfillment of the following requirements before considering an applicant.

1. Graduation from high school with sixteen units of credit as indicated.
2. Aptitude and achievement tests.
3. Three recommendations.
4. Interviews.
5. Physical and dental examination.
6. Transcript of college courses for those who have attended college.

Specific Requirements

I. All applicants for admission to the School of Nursing must present at least sixteen acceptable units of secondary school credit. A unit of credit is allowed for a course of study pursued throughout an academic year at an accredited secondary school, if the course has been completed satisfactorily.

1. Twelve units must be in English, foreign language, history and social studies, mathematics, and natural science; and must include:
 - (a) English—3 units.

(b) Algebra—1 unit.

(c) Plane geometry—1 unit.

2. The four remaining units are elective and may be selected from those subjects for which the school allows credit toward graduation; but it is recommended that they also be selected from the five subject fields listed above.

Other units offered in subjects not included in this list will be considered for acceptance on the basis of full statements transmitted with the applicant's record from the school recommending her.

II. Satisfactory scores on a battery of aptitude and achievement tests.

III. Three recommendations, two of which must come from recent high school or college instructors.

IV. Interviews with two members of the Duke University School of Nursing faculty, whenever possible.

V. Records of recent physical and dental examination.

A physical examination at Duke Hospital is required for final acceptance into the School of Nursing. This examination includes a chest x-ray and a tuberculin test.

ADMISSION TO ADVANCED STANDING IN THE SCHOOL OF NURSING: An applicant for advanced standing must have fulfilled the equivalent of the requirements for admission to the Freshman Class, must present official certificates of all work completed in other institutions, and must have an honorable dismissal from each institution previously attended. Credit for work completed will be determined in relation to the curriculum requirements of the School of Nursing. Applicants admitted to advanced standing may make up deficiencies for admission to the second year by attending the Summer Session.

Applicants for advanced standing in the School of Nursing should present, as far as possible, subjects corresponding to those required by the School. They may not, during their first semester, register for more than the minimum number of hours required of the class which they enter, except by permission of the Dean of the School of Nursing.

Transfer credits are tentatively evaluated pending the completion of two semesters of work in residence. To validate provisional credits the student must earn at least an average of C in a normal load of work. Transfer grades of C or above are rated at one quality point per credit hour when validated. Credits with grades of D are not acceptable.

The maximum amount of credit acceptable from a junior college

is 60 semester hours, exclusive of physical education. No credit is given for work completed by correspondence, and credit for no more than six semester hours is allowed for extension courses. Any extension work accepted must be specifically approved by the dean of the college to which the student seeks admission.

Financial Information and Living Accommodations



FEES paid by students and services of the students to the hospital cover only a part of the cost of their instruction and maintenance and the operation of the University. Income from endowment and contributions from alumni, alumnae, and other public-spirited men and women meet the balance, which constitutes more than half the total cost.

Fees and Estimated Expenses—Diploma Program

A registration fee of \$25.00 is required at the time of acceptance into the school. This advanced fee is applied toward the payment of tuition for the first year. One-half of the tuition fee of \$100.00 is payable at the beginning of each semester. An activities fee of \$15.00 is charged each year. Students pay for their uniforms and are responsible for payments for replacements.

	<i>First Year</i>	<i>Second Year</i>	<i>Third Year</i>
Tuition	\$100.00	\$100.00	\$100.00
Books	40.00	10.00	10.00
Activities	15.00	15.00	15.00
Room Key Deposit	1.00		
Uniforms	84.20		
Graduation Fees			9.25
	<u>\$240.20</u>	<u>\$125.00</u>	<u>\$134.25</u>

No student is permitted to attend classes until she has complied with all regulations concerning registration and payment of bills for the term.

Arrangements for purchase of uniforms are made with the uniform company in the first summer session. At that time, \$70.95 of the cost of the uniforms is paid.

Duke Hospital provides board, room and laundry for students in the School of Nursing in return for their services in the hospital. The rooms in the residence are fully equipped.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and after the fifteenth day all fees are considered as earned and no refunds are made.

Students are entitled to one transcript free of charge. Additional

copies are supplied at \$1.00 each. Records are not released when the Treasurer's office reports an unpaid account.

Fees and Estimated Expenses—Degree Program

A registration fee of \$25.00 is required of all new students. This fee is payable only once; it is not refundable. The general fee is in lieu of special fees usually charged for matriculation, use of laboratories, student health service, commencement, etc. One-half of the tuition and general fees are payable at the beginning of each semester.

	<i>First Year</i>	<i>S.S. 6 wks.</i>	<i>Second Year</i>	<i>Third Year</i>	<i>Fourth Year</i>
Tuition—University	\$ 350.00		\$350.00		
Tuition—School of Nursing ...			100.00	\$100.00	\$100.00
General Fee	150.00		150.00		
Room Rent	160.00	\$ 27.00			
Board	400.00	60.00			
Laundry	30.00	3.00			
Books	40.00	10.00	40.00	40.00	10.00
Activities	15.00		15.00	15.00	15.00
Uniforms		70.95			13.70
Graduation Fees					14.25
	<u>\$1,145.00</u>	<u>\$170.95</u>	<u>\$655.00</u>	<u>\$155.00</u>	<u>\$152.95</u>

No student is permitted to attend classes until she has complied with all regulations concerning registration and payment of bills for the term.

Arrangements for purchase of uniforms are made with the uniform company during the first summer term. At that time, \$70.95 of the cost of the uniforms is paid.

A fee for public health nursing will be added in the senior year when arrangements for the experience are completed.

After the first year and Summer Session the Duke Hospital provides board, room and laundry for students in the degree program of the School of Nursing in return for their services in the hospital. The rooms in the residence are fully equipped.

Students may have their bills sent to parents or guardians provided the Treasurer has been notified in writing with sufficient antecedence. Failure of a student or of a parent or guardian to pay bills on the dates scheduled will debar the student from class attendance until her account is settled in full; subsequent withdrawal does not entitle her to a refund. No student is considered by the Faculty as a candidate for graduation until she has settled with the Treasurer for all her indebtedness to the University. A student who has not settled all her bills with the Treasurer is not allowed to stand the final examinations of the academic year.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and

after the fifteenth day all fees are considered as earned and no refunds are made.

Due to rising costs a readjustment in charges, including room-rentals, is being considered. In the event of an adjustment applicants will be notified.

Students are entitled to one transcript free of charge. Additional copies are supplied at \$1.00 each. Records are not released when the Treasurer's Office reports an unpaid account.

Loan Fund

Through the generosity of the Kellogg Foundation, loan funds sufficient to cover tuition costs are available to students who demonstrate a real need and who are qualified. There are also a limited number of tuition scholarships for exceptionally qualified students.

Residence

Students are housed in a fireproof residence located near the hospital. Rooms are adequately equipped with blankets and linen, making further provision by the student unnecessary. Life in the dormitory is under the regulations established by the Student Government Association with advice from the faculty. The dormitory, Hanes House, is new and planned for comfortable living. A Student Handbook including dormitory regulations is issued to each student.

Students in the degree program pay for rooms in Hanes House during the first year and Summer Session. During the academic year the rental charge for a single room is \$105.00 per semester. The rental charge for a double room is \$80.00 per semester. The charge for laundry for one semester is \$10.00. The rental charges for Summer Session are included under the description of that term on Page 17.

Board for these students may be secured at the hospital for \$200.00 for the semester. Students may prefer to eat at the University cafeterias with multiple choice menus. The cost for the academic year ranges from \$375.00 to \$500.00 depending on the taste of the individual. In the Men's Graduate Center near Hanes House is a cafeteria with multiple choice menus and a Coffee Lounge where sodas and sandwiches are served from 11:30 A.M. to 11:00 P.M. This is closed on Sunday.

Board, room and laundry is provided by Duke Hospital for students in the diploma program throughout the entire program and for students in the degree program after the first year and Summer Session.

The Summer Session



THE programs in the School of Nursing include courses in the Summer Session each year. Students in the School of Nursing have their courses approved in the School of Nursing and pre-register with the Summer Session office. Students from other colleges and universities who are admitted to the School of Nursing with advanced standing are expected to enroll in the Summer Session to make up deficiencies. Arrangements for registration are made through the office of the Dean of the School of Nursing.

The Summer Session of 1954, will include two six-week terms: Term I, June 9 to July 17; Term II, July 20 to August 27. By attending both terms it is possible for a student to earn as many as twelve semester hours of credit.

While the basic purpose of the Summer Session is to serve the academic and the professional requirements of those who are interested in their own educational advancement, the University recognizes the need of, and provides for, a varied recreation program both athletic and social.

University fees are charged at the rate of \$12 per semester hour for those admitted with advanced standing. Board at Duke Hospital is \$10.00 per week per person, room is \$4.50 per week for each occupant of a double room, and laundry is .50 a week. A bill will be sent to all pre-registered student to permit payment in advance.

General Regulations



ORIENTATION PROGRAM: All freshmen and transfer students are required to participate in the Activities of Orientation Week. The program includes general ability, achievement, and placement tests, orientation lectures, physical examinations, social events, special religious services, registration, and enrollment.

The University considers the planning of a course of study to be of primary importance. Perhaps the most significant moments of Orientation Week, therefore, are those which a new student spends with her faculty adviser. With the results of the several tests which all freshmen take available to them, the adviser and the student plan a course of study adapted to the ability, achievements, and goals of the individual student. New students who miss the whole or a part of the Orientation Program place themselves at a serious disadvantage at the very outset of their college career.

Health Regulations

The School has general supervision of the student's health. All physical defects, such as defective vision, dental needs, etc., must be corrected before admission to the School. The student must have been immunized against typhoid fever and vaccinated against smallpox during the current year. All students are required to pass a physical examination before admission to the School of Nursing and at intervals thereafter, a final examination being given at the end of the course. Students whose condition needs further observation may be admitted tentatively, but must cancel their application if later findings prove them physically unfit for nursing.

Students are allowed three weeks' sick leave during the three years of clinical practice.

Health Program

With the exceptions noted below, full medical and surgical care is furnished to all regularly matriculated student nurses. It includes hospitalization in the Student Nurses Infirmary or in a private nursing unit according to the preference of the student or the seriousness of the illness. Medical and Surgical care, drugs, dressings, x-ray, laboratory,

and staff but no private nursing is furnished without charge. Refraction of eyes, treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernias, pilonidal cysts and other elective surgery, chronic skin conditions, endocrine disturbances, etc., and accidents or illnesses occurring during vacations or while off the campus, are not included in this service. The cost of any necessary braces and orthopaedic appliances, as well as of special nursing, must be borne by the student and blood used for transfusions must be paid for or replaced. If the student has insurance providing hospital, medical or surgical benefits, the benefits shall be applied to the cost of her medical care.

Advisory consultation with a Psychiatrist is available through the Dean of Nursing at no expense to the student but office visits for psychotherapeutic interviews cannot be included in this service.

First year students in the four year degree program are not furnished maintenance by the hospital and will be asked to pay for board while hospitalized. Insurance benefits, if any, will be used to cover this.

A nurses health office is maintained in the student nurses' dormitory for the purpose of treating ambulatory cases. Admissions to the hospital are arranged through this office.

Grading

Grades are reported so as to indicate one of four things:

(1) *Passed.* A, B, C, and D are all passing grades. The letters are intended to indicate the following quality of work: A, exceptional; B, superior; C, medium; D, inferior.

(2) *Failed.* A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class.

(3) *Incomplete.* (a) A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. (b) Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

(4) *Absent from final examination.* (a) The grade X indicates that the student was absent from the regularly scheduled examination.

QUALITY CREDIT: The requirements for the degree are computed not only in semester hours but also in quality points. Quality points are earned by a student on the basis of her grades: for an A she receives three quality points for each semester hour; for a B, two quality points for each semester hour; for a C, one quality point for each semester hour; for a D, no quality points; for an F, a loss of one quality point for each semester hour. Credit for at least 125 quality

points, exclusive of physical education, is required for the degree of Bachelor of Science in Nursing.

Readmission

Students who are absent for more than one month on account of illness or have leave of absence may be readmitted to the same or a succeeding class at the discretion of the faculty.

Leave of Absence

Students are not expected to leave the School because of family or other personal reasons. Absence from the School is granted only in extreme cases. If a student is obliged to be away for a period exceeding four weeks, the Dean of the School of Nursing will determine the date of her return and the question of resuming her place in her original class.

Dismissal

The faculty of the School of Nursing may, at any time, place a student on probation or release her from the School if, in its opinion, she does not have the qualifications necessary for the profession. A student of the freshman class to remain in the degree program must pass at least six semester hours of work in her first semester and eighteen semester hours in her first academic year.

The Duke University School of Nursing Alumnae Association



THE Duke University School of Nursing Alumnae Association was formed for the purpose of rendering mutual help and improvement in professional work, and for the promotion of good fellowship among the graduates of the School.

The Alumnae Association co-operates with the North Carolina State Nurses' Association and the American Nurses' Association in working for the professional and educational advancement of nursing.

Alumnae Notes, a quarterly news publication, furnishes items of interest to the members of the Association.

Santa Filomena



SANTA FILOMENA, Senior Honorary of the Duke University School of Nursing, was organized in April, 1944, under the sponsorship of the 1943 class. The purpose of this organization is to recognize achievement and promote leadership.

The members are chosen from the rising Senior Class and are publicly tapped by the old members at the first meeting of the SGA in their senior year, the number chosen not exceeding nine or being less than five. Each candidate must show recognized qualities of leadership or must have made some contribution toward the betterment of the School of Nursing. She must have demonstrated superior nursing abilities and her scholastic record must be C or above throughout her first two years.

Santa Filomena strives for better interclass relations, and to promote better nursing and higher nursing standards. The specific objectives are chosen by the members each year. All proceedings of the meetings of this organization are held in secrecy as are all ceremonies except the public tapping of the new members. The Santa Filomena's flower is the white lily and the members wear a small gold Florence Nightingale lamp.

Awards to Nurses



BAGBY AWARD IN PEDIATRICS

The Bagby Award in Pediatrics (a subscription to the *American Journal of Nursing*) is given at graduation to the best Duke student nurse in pediatrics.

THE FLORENCE NIGHTINGALE PLAQUE

The Florence Nightingale plaque is awarded to a graduating student by the Alumnae Association for leadership, scholarship and nursing skill.

THE MOSELEY AWARD

The Moseley Award of \$25.00 is given to the student in the senior class who has shown the most skill in Nursing Arts throughout her program in the School of Nursing.

Requirements for Degrees in Nursing



Programs of the School of Nursing

THE School of Nursing offers two programs for students wishing to prepare for the profession of nursing. The diploma program covers a period of three calendar years with one month of vacation each year. At the completion of this program, the student receives the diploma in nursing and is then eligible for the examinations given by the North Carolina State Board of Nurse Examiners.

The program leading to the degree of B.S. in Nursing covers a period of four years; one academic year and one summer term and three calendar years. At the completion of this program, the student receives the degree of B.S. in Nursing and is then eligible for the examinations given by the North Carolina State Board of Nurse Examiners. The School is fully approved by the North Carolina Joint Committee on Standardization.

Program I Leading to a Diploma in Nursing

To fulfill the requirements for a diploma in Nursing a student must complete 67 semester hours as outlined below, and show proficiency in the practice of nursing.

SUMMER SESSION (12 WEEKS)

<i>First Term</i>	S.H.	<i>Second Term</i>	S.H.
Chemistry.....	3	Zoology.....	3
Orientation to the Health Field..	2	Introduction to Nursing.....	1
	<hr/> 5		<hr/> 4

FIRST YEAR

<i>First Semester</i>	S.H.	<i>Second Semester</i>	S.H.
Anatomy & Physiology.....	3	Anatomy & Physiology.....	3
Physiological Chemistry.....	3	Medical & Surgical Nursing....	6
Nutrition.....	3	Microbiology.....	3
Nursing Arts.....	4	Nursing Arts.....	2
Social Psychology.....	2	Social Psychology.....	2
	<hr/> 15		<hr/> 16

SUMMER SESSION (12 WEEKS)

	S.H.
Medical & Surgical Nursing.....	3

*SECOND YEAR

<i>First Semester</i>	S.H.	<i>Second Semester</i>	S.H.
Medical & Surgical Nursing including O. R. & Diet Therapy.....	4	Obstetric Nursing.....	4
Child Development.....	3		4
	7		

* Class divided into four sections and rotated on these four services.

SUMMER SESSION (12 WEEKS)

	S.H.
N120 Pediatric & Communicable Disease Nursing.....	4

*THIRD YEAR

<i>First Semester</i>	S.H.	<i>Second Semester</i>	S.H.
Psychiatric Nursing.....	4	Advanced Medical & Surgical Nursing with Seminar on Nursing Problems.....	2
	4	Social Foundations of Nursing Education.....	3
			5

Description of Courses—Diploma Program

BIOLOGICAL AND PHYSICAL SCIENCE

ANATOMY AND PHYSIOLOGY.—The student gains an understanding and appreciation of the way body structure and body functions serve to maintain and promote health. These enable the student to practice and teach good hygiene and to comprehend anatomical and physiological pathology intelligently. Audio-visual aids are used extensively and in conjunction with laboratory work the anatomical structures are demonstrated on dissected human specimens and certain physiological principles are demonstrated. 6 s.h. DR. MARKEE AND STAFF

CHEMISTRY.—A course in the fundamentals of general inorganic chemistry with particular emphasis on the needs of the student nurse. A brief introduction to organic chemistry. 3 s.h. DR. TAYLOR

PHYSIOLOGICAL CHEMISTRY.—This course is designed to aid the student in understanding the chemical mechanisms of the human body both in health and in disease. The student also acquires knowledge concerning the chemical basis of diagnosis and therapy. 3 s.h. DR. TAYLOR

MICROBIOLOGY.—From the learning experiences included in this course the student is enabled to understand and appreciate the role in the prevention of microbial disease. 3 s.h. DR. POPE

PHYSICAL EDUCATION.—First year students are required to elect either swimming or basketball.

ZOOLOGY.—A course in general zoology especially adapted for those preparing to enter the profession of nursing. During the course emphasis will be placed on the principles of zoology as they apply to a vertebrate animal; the frog will be used as the type animal.

SOCIAL SCIENCE

N2. INTRODUCTION TO NURSING.—Designed to give the student an appreciation of the historical development of some of the present concepts in nursing. 1 s.h. ASSISTANT PROFESSOR INGLEF

SOCIAL PSYCHOLOGY.—Through a study of the role of social and cultural patterns in their interaction with the individual personality and through an understanding of behavior development and personality adjustment, it is hoped that the student may advance toward maximum personal, social and professional maturity. By exploration of social patterns she learns something of the structure of contemporary society. Through a study of the techniques used in understanding and getting along with others, the student becomes better able to use these techniques in her own contacts with people. 4 s.h.

ASSISTANT PROFESSOR KOCH

CHILD DEVELOPMENT.—A study of principles of human growth and development with special emphasis on the understanding of children's needs, learning and behavior at various levels of development. Importance of infancy and pre-school years in the development of the individual. Planned especially for nurses. Two lectures and one laboratory period. 3 s.h.

DR. REICHENBERG-HACKETT

N160. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—This course is designed to help the student consider the opportunities open to her, her special aptitudes and abilities, her responsibilities, the fields of work for which she presents potentially the best qualifications and how to get started in a professional career. She is helped to see the place of nursing in the social and economic world of today. Emphasis is placed on the need for cooperation between all professions if satisfactory conditions for the maintenance of health and the prevention of disease are to be realized. 3 s.h.

PROFESSOR WILSON

NURSING AND ALLIED ARTS

Nursing 92 includes 20 hours a week of correlated clinical experience. Nursing 93, 120, 130, 140, 170 and 190, include 34 hours a week of correlated clinical experience.

N1. ORIENTATION TO THE HEALTH FIELD.—An introduction to basic health needs of the community and the agencies and programs designed to meet them. 2 s.h.

ASSISTANT PROFESSOR MASSEY

N61-62. NURSING ARTS.—A study of the fundamentals of healthful living and their application to basic nursing care in the home and in the hospital. Considers the nursing needs of individual patients and provides opportunity to plan and give patient care. 6 s.h.

ASSISTANT PROFESSOR RAPPAPORT, MISS KNOWLES, AND STAFF

Nutr. 53. NORMAL NUTRITION AND DIETETICS.—This course considers the nutritive requirements for individuals in different stages of development, and in different occupations. The methods of supplying foods conforming to the individual nutritional needs are given for varying income levels. Actual foods are compared according to their contribution of specific nutrients, and in relation to their place in the daily diet. 3 s.h.

MISS BARNARD

N92-93. MEDICAL AND SURGICAL NURSING.—A study of basic principles underlying nursing care of patients with common medical and surgical conditions. Pharmacology, nutrition in disease, and therapeutics are included. 9 s.h.

ASSISTANT PROFESSOR INGLES AND STAFF; PROFESSOR HART AND STAFF; PROFESSOR STEAD AND STAFF

120. PEDIATRICS AND COMMUNICABLE DISEASE.—This course is designed to help the student understand children, their response to illness, and the therapy involved in their care so that she can assume her role in child health promotion. A developmental approach is used throughout the course with emphasis on the child as a member of the family. The acute communicable diseases of childhood are included.

MISS AREY; PROFESSOR HARRIS AND STAFF

N130. OBSTETRIC NURSING.—Considers normal and abnormal phases of the reproductive cycle basic to nursing care of the mother and the newborn child including the premature infant; the effect of reproduction upon individual and family. 4 s.h.

MISS J. WILSON, MISS KIERNAN; PROFESSOR CARTER AND STAFF

N140. MEDICAL AND SURGICAL NURSING.—A continuation of Nursing 93. A discussion of principles of surgical aseptic technique basic to nursing practice in the operating room and practice in nutrition in disease is included in this course. 4 s.h. ASSISTANT PROFESSOR INGLES AND STAEF; MISS CAMPBELL. MISS KICKLIGHTER; PROFESSOR HART AND STAEF; PROFESSOR STEAD AND STAEF

N170. PSYCHIATRIC NURSING.—Discussion of the principles of psychiatric nursing and the functions and responsibilities of the nurse in the total care of the psychiatric patient with emphasis on mental hygiene and care and rehabilitation of the mentally ill. 4 s.h.

PROFESSOR BUSSE, ASSISTANT PROFESSOR ZUKOWSKI AND STAEF

N190. ADVANCED MEDICAL AND SURGICAL NURSING.—Designed to clarify and broaden understanding of basic principles requisite for nursing care. Conference and seminars. 2 s.h. ASSISTANT PROFESSOR INGLES

Program II Leading to a B.S. in Nursing and a Diploma in Nursing

To fulfill the requirements for the degree of B.S. in Nursing, a student must complete 127 semester hours as outlined below, earn 127 quality points, and show proficiency in the practice of nursing.

The requirements for the degree of Bachelor of Science in Nursing are based on the principle that the student will derive the maximum benefit if the program includes a broad distribution of studies among representative fields.

For graduation with the degree of Bachelor of Science in Nursing, the following course work must be completed.

UNIFORM COURSE REQUIREMENTS	S.H.
English	6
Natural and Biological Science	23
Religion	6
Social Science and History	24
Literature, Music, Art Philosophy	6
Physical Education	2
Major (Nursing) and related work	60
Total	127

These requirements are described in detail below.

ENGLISH, 6 s.h.—This requirement is met by the completion of English 1-2. Students who demonstrate proficiency in English usage may be allowed to substitute 55 or 56 for English 1.

NATURAL AND BIOLOGICAL SCIENCE, 23 s.h.—To satisfy this requirement a student must complete laboratory courses in General Chemistry (3 s.h.), Physiological Chemistry (3 s.h.), Zoology (8 s.h.), Anatomy and Physiology (6 s.h.), and Microbiology (3 s.h.).

RELIGION, 6 s.h.—To meet this requirement 6 semester hours must be chosen from Religion 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

SOCIAL SCIENCE AND HISTORY, 24 s.h.—To satisfy this requirement students must take Education 88 and 118, Psychology 116 and Sociology 91, 92 and N151. The remaining 6 s.h. may be selected from History 1-2 or 51-52 and Political Science 11-12 or 61-62 (Students who do not present for entrance 2 acceptable units of History must select History).

LITERATURE, MUSIC, ART, AND PHILOSOPHY, 6 s.h.—This requirement can be satisfied by a total of 6 semester hours in courses in English or American literature, foreign literature courses numbered above 100, literature courses in translation, courses in aesthetics, art, music, and courses in Philosophy (except 48, 103, 104, 109, 199).

PHYSICAL EDUCATION, 2 s.h.—In the School of Nursing, Physical Education is required during the first year and must be completed by the end of the first year.

MAJOR AND RELATED WORK, 60 s.h.—This requirement is met by completing courses in the School of Nursing in accordance with the regulations described.

The work is divided as follows:

FIRST YEAR					
<i>First Semester</i>			<i>Second Semester</i>		
		S.H.			S.H.
Eng	1 Freshman Composition....	3	Eng	2 Freshman Composition....	3
*Hist	1 Historical Background of the World Today.....	3	*Hist	2 Historical Background of the World Today.....	3
*Pol Sc	11 The American System of Government.....	3	*Pol Sc	12 The American System of Government.....	3
Relig	1 The English Bible.....	3	Relig	2 The English Bible.....	3
N	1 Orientation to the Health Field.....	2	Micro	4 Microbiology.....	3
Zool	1 General Zoology.....	4	N	2 Introduction to Nursing...	1
	Physical Education.....	1	Zool	2 General Zoology.....	4
		16		Physical Education.....	1
					18

SUMMER SESSION (6 WEEKS)

<i>First Term</i>		S.H.
Chem 50	Chemistry.....	3
Ed 88	Educational Psychology....	3
		6

SECOND YEAR

<i>First Semester</i>		S.H.	<i>Second Semester</i>		S.H.
Anat 51	Anatomy & Physiology....	3	Anat 52	Anatomy & Physiology....	3
Chem 51	Physiological Chemistry....	3	N 92	Medical & Surgical Nursing.	6
Nutr 53	Nutrition.....	3	Ed 118	Educational Psychology— Developmental.....	3
N 61	Nursing Arts.....	4	N 62	Nursing Arts.....	2
Soc 91	General Sociology.....	3	Soc 92	General Sociology.....	3
		16			17

SUMMER SESSION (16 WEEKS)

<i>First Term (6 weeks)</i>		S.H.	<i>Second Term (10 weeks)</i>		S.H.
Elective	Literature, Music, Art or Philosophy.....	3	N 95	Introduction to the Field of Social Work.....	3
N 93	Medical & Surgical Nursing (cont. through summer).....	3			3
		6			

THIRD YEAR

<i>First Semester</i>		S.H.	<i>Second Semester</i>		S.H.
N 120	Pediatric & Communi- cable Disease Nursing..	6	N 130	Obstetric Nursing.....	6
†Soc N151	Family Relationships....	3	†Psych 116	Psychology of Adjustment.....	3
		9			9

* Choice.

† One-half of class each semester.

SUMMER SESSION (16 WEEKS)

	S.H.
N180 Public Health Nursing.....	3
N140 Medical & Surgical Nursing including O. R. & Diet Therapy.....	6
	<hr/> 9

FOURTH YEAR

<i>First Semester</i>	S.H.		<i>Second Semester</i>	S.H.
Elective above 100 level.....	3	N 181	Public Health Nursing cont. with Field Experience.	3
N 160 Social Foundations of Nursing Education.....	3			
N 170 Psychiatric Nursing.....	6			
	<hr/> 9			<hr/> 3

SUMMER SESSION (16 WEEKS)

	S.H.
N190 Advanced Medical & Surgical Nursing with Seminar on Nursing Problems.....	3

In the junior year the class is divided into three sections and rotated in the three major nursing courses.

In the senior year one half of the class are registered in Public Health Nursing each semester; the other half is divided between Psychiatry and Advanced Medical and Surgical Nursing. In the Summer Session the students are registered in Medical and Surgical Nursing (N 190) and Psychiatric Nursing (N 170).

Description of Courses—Degree Program

UNDERGRADUATE COLLEGES

EDUCATION

88. EDUCATIONAL PSYCHOLOGY: LEARNING AND MEASUREMENT.—

This course and Education 118 constitute a general introduction to the field of Educational Psychology. This course deals with (1) the psychology of learning, including: the nature of the learning process; general principles or laws of learning; the course of learning and forgetting; factors influencing efficiency in learning and retention; and the transfer of training; and (2) measurement, including: the basic concepts in the measurement of intelligence; standardized achievement tests; the extent and significance of individual differences in ability and performance. Opportunity will be afforded for examination and study of a variety of tests of intelligence and achievement. *Either semester.* 3 s.h. (E)

ASSOCIATE PROFESSORS EASLEY AND RUDISILL;
AND ASSISTANT PROFESSOR PETTY

118. EDUCATIONAL PSYCHOLOGY: PSYCHOLOGICAL DEVELOPMENT.—

This course traces the psychological development of the individual from infancy to maturity. The principal topics considered are: the interdependence of hereditary and environmental factors in development, the nature of the development process, the establishment of the early basic patterns of behavior, changes and conditions producing these changes throughout childhood and adolescence to maturity, and the origin and treatment of minor behavior disorders. To the degree practicable, students will observe children in typical and atypical situations as a means of securing concrete data on the problems treated in the course. Not open to students who have had Psychology 121 or 126. Prerequisite: three semester hours in psychology or educational psychology. *Either semester.* 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

ENGLISH

L. ENGLISH FUNDAMENTALS.—All freshmen whose scores on the placement tests indicate that they are not ready for English 1 must take this course. Students who fail in English L must repeat the course. Students who have earned credit in English L must also take English 1 and 2. 3 s.h. (w)

ASSISTANT PROFESSOR JORDAN AND MR. NEWELL

1-2. ENGLISH COMPOSITION.—All freshmen are required to take course 1 and course 2.

Students who fail in English 1 or 2 must repeat the course in the following semester. Students in courses 1 and 2 who fail to make an average of "C" or better are strongly advised to earn credit for an additional course in English composition. 6 s.h. (E & W)

PROFESSOR WARD; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, BUDD, HARWELL, JORDAN, POTEAT, SUDGEN, WHITE, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MESSRS. BROOKS, HOLMES, KEIRCE, MULDER, NEWELL, AND, PADGETT

ENGLISH AND AMERICAN LITERATURE AND LANGUAGE

55, 56. REPRESENTATIVE WRITERS.—The following works are studied in the first semester: Chaucer's Prologue to *The Canterbury Tales* and at least two tales, Shakespeare's *1 Henry IV*, *King Lear*, and one other play, the English Bible (selections), Milton's *Paradise Lost* (selections) and some of the shorter poems; in the second semester: Pope's poems (selections), Fielding's *Joseph Andrews* or *Tom Jones*, selections from Keats's or Wordsworth's poems, selections from Browning's or Arnold's poems, Thackeray's *Vanity Fair* or Hardy's *The Mayor of Casterbridge*, selections from Yeats's poems, two plays by Shaw or a twentieth-century British or American novel. 6 s.h. (E & W)

PROFESSORS BLACKBURN, BOYCE, SANDERS, AND TURNER; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, POTEAT, SUDGEN, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MR. MULDER

HISTORY

1, 2. HISTORICAL BACKGROUND OF THE WORLD TODAY.—This course is an introduction to the study of modern history with special reference to the issues in the modern world. Topics selected for emphasis are: the contest between liberty and authority in the modern state; changing economic organization and theory—capitalism and the challenges to it; the problems of peace and war among the states; the changing faith men live and die by. Beginning about 1500 with the rise of the European dynastic states, the story is pursued in the first semester to approximately 1871, and in the second through the two great world wars. The central theme in both semesters is the expansion of the influence of Western Europe throughout the world, with some attention to the rise of the United States as a world power. 6 s.h. (W & E)

Sophomores and juniors are not admitted to this course. One semester of the course may be counted as a general elective but not as fulfilling the minimum uniform requirements or, except as provided above, as a basis of further work in history.

PROFESSOR HAMILTON; ASSOCIATE PROFESSORS FERGUSON, PARKER, AND ROPP; ASSISTANT PROFESSORS ACOMB, COLTON, AND DeCOMBE;
DR. DURDEN, MR. DOWNS, AND MR. OLIVER

51, 52. HISTORICAL BACKGROUND OF THE WORLD TODAY.—An introductory course for sophomores, juniors, and seniors dealing with the topics indicated in the description of course 1-2. 6 s.h. (W & E)

PROFESSOR CURTISS; ASSOCIATE PROFESSOR ROPP; ASSISTANT PROFESSORS ACOMB AND COLTON; DR. DURDEN;
MR. DOWNS AND MR. OLIVER

PHILOSOPHY

49. ETHICS.—An introductory consideration of basic ethical concepts and principles as developed in European and American thought and culture. 3 s.h. (E & W)
 PROFESSORS BAYLIS AND NEGLEY; ASSISTANT PROFESSOR WELSH

POLITICAL SCIENCE

11-12. THE AMERICAN SYSTEM OF GOVERNMENT.—An introductory study of the principles and operation of the American government in the light of the present world position of the United States. (Only open to Freshmen.) 6 s.h.
 (E. & W) STAFF

[Students completing 11 in the spring semester should take course 62.]

61-62. AMERICAN GOVERNMENT AND POLITICS.—A study of the American constitutional and political system. Among other topics attention is given to the development of the constitution, federal-state relations, political parties and the organization and functions of the national, state and local governments. 6 s.h.
 (W & E) PROFESSOR CONNERY; ASSOCIATE PROFESSOR SIMPSON; ASSISTANT PROFESSORS CHEEK AND HANSON; DR. HALL

[Not open to freshmen or to students who have had courses 11-12 or 63-64.]

REQUIRED PHYSICAL EDUCATION

Two semester hours to be completed in two semesters are included in the 127 hours required for graduation.

At the beginning of the freshman year, after a series of tests have been given, individual conferences are held and each student is guided into the type of activity she most needs, as determined from the evaluation of the test scores and the results of the conference. This course continues for half the semester after which all freshmen take body mechanics and social recreation for the remainder of the semester.

Every student will take one semester of elected activity offered by the Department.

PSYCHOLOGY

116. PSYCHOLOGY OF ADJUSTMENT.—The course is planned to give an adequate understanding of problems of adjustment and of mental hygiene. Lectures and discussions cover an application of the principles and findings of normal and abnormal psychology as these relate to the adjustment of the average individual in our changing society; a survey of the principles of mental hygiene; discussions of current socio-cultural trends significant for individual adjustment. 3 s.h. (E)
 ASSISTANT PROFESSOR REICHENBERG-HACKETT

RELIGION

1. THE ENGLISH BIBLE.—A survey of the contents of the Old Testament books in the light of their origin in the history and religion of the Hebrew people. 3 s.h.
 (E & W) PROFESSOR CRUM; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT

PROFESSORS BRADLEY, PERRY, PRICE, SALES,
 AND WETHINGTON; MR. DANIELS

2. THE ENGLISH BIBLE.—A study of the personalities and literature of the New Testament against their Jewish, Hellenistic and Roman background. Although Religion 1 is not a prerequisite, it will be an aid to the student to complete 1 before taking 2. 3 s.h. (E. & W.)
 PROFESSORS CRUM AND MYERS; ASSOCIATE PROFESSOR

PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY,
 PRICE, SALES AND WETHINGTON; MR. DANIELS

51. THE ENGLISH BIBLE.—An introductory course in the Old Testament for sophomores and juniors. (See description of Religion 1.) Students may not receive credit for both 51 and 1. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT
 PROFESSORS BRADLEY, PRICE, SALES AND
 WETHINGTON; MR. DANIELS

52. THE ENGLISH BIBLE.—A survey course in New Testament life and literature for sophomores and juniors. (See description of Religion 2.) It will be to the advantage of the students to take Religion 1 or 51 before taking 52. Students may not receive credit for both 52 and 2. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PRICE, SALES, AND WETHINGTON; MR. DANIELS

SOCIOLOGY

91-92. GENERAL SOCIOLOGY.—An introduction to the scientific study of social life; its origin, evolution and organization as illustrated in the study of a number of concrete social problems. 6 s.h. (E & W)

PROFESSOR JENSEN; ASSOCIATE PROFESSOR SCETTTLER; ASSISTANT PROFESSORS ROY AND WHITRIDGE; MR. MCNURLEN

Sociology N151. FAMILY RELATIONS.—This course has two objectives. First, it seeks to familiarize students with those basic facts and problems in family life of which an understanding is essential to successful professional work by nurses. Second, the course seeks to provide students with such information and insights as may aid them in making successful adjustments in their own courtship and marriage. Either semester. 3 s.h.

INSTRUCTOR TO BE ANNOUNCED.

ZOOLOGY

1. ANIMAL BIOLOGY.—The principles of biology as applied to animals. 4 s.h. (W & E)

ASSOCIATE PROFESSORS HUNTER AND ROBERTS AND STAFF

2. GENERAL ZOOLOGY.—A brief survey of the animal kingdom. Prerequisite: Zoology 1. 4 s.h. (W & E)

ASSOCIATE PROFESSORS BOOKHOUT AND HUNTER AND STAFF

SCHOOL OF NURSING

BIOLOGICAL AND PHYSICAL SCIENCE

Anat. 51-52. ANATOMY AND PHYSIOLOGY.—The student gains an understanding and appreciation of the way body structure and body functions serve to maintain and promote health. These enable the student to practice and teach good hygiene and to comprehend anatomical and physiological pathology intelligently. Audio-visual aids are used extensively and in conjunction with laboratory work the anatomical structures are demonstrated on dissected human specimens and certain physiological principles are demonstrated. 6 s.h.

DR. MARKEE AND STAFF

CHEMISTRY

Chem. 50. CHEMISTRY.—A course in the fundamentals of general inorganic chemistry with particular emphasis on the needs of the student nurse. A brief introduction to organic chemistry. 3 s.h.

DR. TAYLOR

Chem. 51. PHYSIOLOGICAL CHEMISTRY.—This course is designed to aid the student in understanding the chemical mechanism of the human body both in health and in disease. The student also acquires knowledge concerning the chemical basis of diagnosis and therapy. 3 s.h.

DR. POPE

Micro. 4. MICROBIOLOGY.—From the learning experiences included in this course the student is enabled to understand and appreciate the role in the prevention of microbial disease. 3 s.h.

DR. POPE

SOCIAL SCIENCE

N2. INTRODUCTION TO NURSING.—Designed to give the student an appreciation of the historical development of some of the present concepts in nursing. 1 s.h.

ASSISTANT PROFESSOR INGLES

N160. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—This course is designed to help the student consider the opportunities open to her, her special aptitudes and abilities, her responsibilities, the fields of work for which she presents

potentially the best qualifications and how to get started in a professional career. She is helped to see the place of nursing in the social and economic world of today. Emphasis is placed on the need for cooperation between all professions if satisfactory conditions for the maintenance of health and the prevention of disease are to be realized. 3 s.h.

PROFESSOR WILSON

NURSING AND ALLIED ARTS

N92-93. Includes 12-24 hours per week of correlated clinical experience.

N120, 130, 140, 170, 190.—Includes 30 hours a week of correlated clinical experience.

N1. ORIENTATION TO THE HEALTH FIELD.—An introduction to basic health needs of the community and the agencies and programs designed to meet them. 2 s.h.

ASSISTANT PROFESSOR MASSEY

N61-62. NURSING ARTS.—A study of the fundamentals of healthful living and their adoption to basic nursing care in the home and in the hospital. Considers the nursing needs of individual patients and provides opportunity to plan and give the patient care. 6 s.h.

ASSISTANT PROFESSOR RAPPAPORT, MISS KNOWLES AND STAFF

Nutr. 53. NORMAL NUTRITION AND DIETETICS.—This course considers the nutritive requirements for individuals in different stages of development, and in different occupations. The methods of supplying foods conforming to the individual nutritional needs are given for varying income levels. Actual foods are compared according to their contribution of specific nutrients, and in relation to their place in the daily diet. 3 s.h.

MISS BARNARD

N92-93. MEDICAL AND SURGICAL NURSING.—A study of basic principles underlying nursing care of patients with common medical and surgical conditions. Pharmacology and therapeutics, nutrition in disease, and community aspects are included. 9 s.h.

ASSISTANT PROFESSOR INGLES AND STAFF; ASSISTANT

PROFESSOR MASSEY; PROFESSOR HART AND STAFF;

PROFESSOR STEAD AND STAFF

N95. INTRODUCTION TO THE FIELD OF SOCIAL WORK.—An orientation to social work services and how they may be used to meet patients' needs in illness and in rehabilitation. 3 s.h.

MISS WIEN

N120. PEDIATRIC AND COMMUNICABLE DISEASE NURSING.—This course is designed to help the student understand children, their response to illness, and the therapy involved in their care, so that she can assume her role in child health promotion in the hospital, the home, and the community. A developmental approach is used throughout the course with emphasis on the child as a member of the family. The acute communicable diseases of childhood are included.

ASSISTANT PROFESSOR MASSEY, MISS AREY, PROFESSOR HARRIS AND STAFF

N130. OBSTETRIC NURSING.—Considers normal and abnormal phases of the reproductive cycle basic to nursing care of the mother and newborn child including the premature infant. The effect of reproduction upon individual and family; community aspects and opportunities for teaching in maternal health promotion. 6 s.h.

ASSISTANT PROFESSOR MASSEY, MISS J. WILSON,

MISS KIERNAN, DR. CARTER AND STAFF

N140. MEDICAL AND SURGICAL NURSING.—A continuation of Nursing 93. A discussion of principles of surgical aseptic technique basic to nursing practice in the operating room and practice in nutrition in disease are included in this course. 6 s.h.

ASSISTANT PROFESSOR INGLES AND STAFF; ASSISTANT

PROFESSOR MASSEY, MISS CAMPBELL, PROFESSOR

HART AND STAFF; PROFESSOR STEAD AND STAFF

N170. PSYCHIATRIC NURSING.—Discussion of the principles of psychiatric nursing and the functions and responsibilities of the nurse in the total care of the psychiatric patient with emphasis on mental hygiene and care and rehabilitation of the mentally ill. 6 s.h.

ASSISTANT PROFESSOR ZUKOWSKI,

PROFESSOR BUSSE AND STAFF

N180. PUBLIC HEALTH NURSING.—Principles, development, and trends of public health nursing with special consideration given to public health nursing in a health department serving a rural community. 3 s.h.

ASSISTANT PROFESSOR MASSEY

N181. PUBLIC HEALTH NURSING FIELD EXPERIENCE.—Planned, supervised practice in a public health agency in which the nursing service provides a program of family health guidance. 3 s.h.

ASSISTANT PROFESSOR MASSEY

N190. ADVANCED MEDICAL AND SURGICAL NURSING.—Designed to clarify and broaden understanding of basic principles requisite for nursing care. Emphasis is placed upon application of prior learning to health teaching and guidance of hospital patients. Conferences and seminars. 3 s.h.

ASSISTANT PROFESSOR INGLES,

ASSISTANT PROFESSOR MASSEY

Division of Nursing Education



Advanced Professional Programs

A DIVISION of Nursing Education was established in December, 1944, as an integral part of the Department of Education of Duke University. At the present time, qualified graduate nurses may work toward the degree of Bachelor of Science in Nursing Education.

The primary objective of the degree program for graduate nurses is to prepare qualified individuals for teaching and supervisory positions in schools of nursing and in nursing service agencies. Facilities for instruction include the undergraduate colleges of Duke University, the School of Nursing, the Medical School and Duke Hospital.

I. Degree of Bachelor of Science in Nursing Education

ADMISSION

Students who wish to work toward the degree of Bachelor of Science in Nursing Education must apply for admission to the Woman's College of Duke University. To be accepted they must satisfy the following requirements with respect to their high school education:

1. Graduation from an approved secondary school with at least fifteen acceptable units of credit.
2. Twelve units must be in English, foreign language, history and social studies, mathematics and natural science.
3. Three units may be in subjects listed above or in such subjects as art, commercial subjects, household economics, or music.

Students who have satisfactorily completed one or more years of college work in an approved college or university must also fulfill the requirements listed above with respect to high school credit, must present official transcripts of all work done in other institutions, and must have honorable dismissal from each institution previously attended.

Other basic minimum requirements include:

4. Graduation from an approved school of nursing.
5. Satisfactory ratings from individuals, with whom the applicant has had fairly recent contact.

OUTLINE OF PROGRAM

Credit for 120 semester hours (exclusive of physical education) on which an average grade of at least "C" is made is required for the degree of Bachelor of Science in Nursing Education. The work of the final year must be taken in residence at Duke University. One year of experience as a graduate nurse is required before the degree is awarded. The program of studies leading to this degree must include:

1. Minimum general education requirements (may be satisfied at Duke University or at any accredited college or university).

	S.H.
English 1-2.....	6
Natural Science.....	8
History, Economics or Political Science.....	6
Sociology.....	3-6
Psychology.....	3-6
Electives.....	<u>12-15</u>
(Literature, art, music, religion, ethics, language)	
	44

2. Basic Nursing Program 40 (maximum)

In evaluating credit the standing of the School of Nursing, the record of the individual student, and scores on basic nursing achievement tests administered by the Department of Measurement and Guidance of the National League for Nursing to all candidates as soon as they enroll in their first course are taken into consideration.

3. Courses in Education and Nursing Education.

	S.H.
88. Educational Psychology: Learning and Measurement.....	3
118. Educational Psychology: Psychological Development.....	3
84N. Social Foundations of Nursing Education.....	3
101N. The Curriculum of the School of Nursing.....	3
115N. } Nursing Education—Principles and Practice.....	8
116N. }	
117. Community Nursing—Seminar and Field Trips to Community Agencies.....	<u>3</u>
	23

4. Minimum of fifteen semester hours in one field, such as zoology, chemistry, physics, sociology, or psychology, or in a clinical area.

The following courses in clinical areas are offered at present:

	S.H.
120N. Problems in Nursing Care.....	3
130N. Psychosomatic Nursing.....	4
131N. } Psychiatric Nursing.....	8
132N. }	
133N. Seminar in Psychiatric Nursing.....	3
134N. } Medical and Surgical Nursing.....	8
135N. }	
136N. Seminar in Medical and Surgical Nursing.....	3

Other courses which are offered to graduate nurses are as follows:

192N. Principles and Methods of Teaching in School of Nursing.....	3
193N. Ward Administration and Teaching.....	3
195N. Personnel Work in Schools of Nursing.....	3
124N. Nursing Education: Teaching of the Nursing Arts.....	3

DESCRIPTION OF COURSES

84N. SOCIAL FOUNDATION OF NURSING EDUCATION.—A special section of Education 84, applied to Nursing Education. A survey of major historical, philosophical, and sociological factors which have affected developments in nursing and Nursing Education. The purpose of the course is to give the student a better understanding of the place of nursing in present day society and the responsibilities of the individual nurse toward that society. 3 s.h. ASSISTANT PROFESSOR RAPPAPORT

101N. THE CURRICULUM IN THE SCHOOL OF NURSING.—The general principles of curriculum making and the factors which determine the content and organization of the nursing school curriculum are considered in this course. 3 s.h. ASSISTANT PROFESSOR INGLES

115N-116N. NURSING EDUCATION: PRINCIPLES AND PRACTICE.—A special section of Education 115-116. Principles of teaching applied to the nursing school situations and the planning and evaluation of instruction. Ninety hours of observation and of supervised teaching in the Duke University School of Nursing are required. Four hours of conference, observation, and practice teaching are required each week. Before beginning practice teaching, students must complete thirty hours of observation. (Not open to students who have had course 115-116.) 8 s.h.

ASSISTANT PROFESSOR RAPPAPORT

117N. COMMUNITY NURSING.—Designed for administrators, teachers, and supervisors in schools of nursing. Emphasis is on the integration of out-patient departments and community social and health agencies into the nursing school curriculum and on the preparation of nurses for community service. 3 s.h.

ASSISTANT PROFESSOR MASSEY

120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. 3 s.h.

ASSISTANT PROFESSOR INGLES, ASSISTANT PROFESSOR ZUKOWSKI

124N. NURSING EDUCATION: TEACHING OF THE NURSING ARTS.—In this course an effort is made to help prospective teachers to integrate the facts and principles of the natural, social, and medical sciences into the teaching of nursing arts. Though major emphasis is placed upon problems which are involved in teaching the first course, the concept of the nursing arts as an integral part of each clinical area is stressed. 3 s.h.

ASSISTANT PROFESSOR RAPPAPORT, MISS INGLES

130N. PSYCHOSOMATIC NURSING.—A study of the close relationship between mind and body in all illness and of the techniques of observation and interview both experimental and therapeutic. Lectures, clinics, conferences, discussions, and experience with patients. 4 s.h.

ASSISTANT PROFESSOR ZUKOWSKI

131N-132N. PSYCHIATRY AND PSYCHIATRIC NURSING.—An advanced study with special emphasis on personality development and the preventive and therapeutic aspects of psychiatry and psychiatric nursing. In the second semester the management of practical situations of increasing complexity is stressed. Lectures, clinics, conferences, discussions, and experience with patients. 8 s.h.

ASSISTANT PROFESSOR ZUKOWSKI, AND MEDICAL STAFF IN PSYCHIATRY

133N. SEMINAR IN PSYCHIATRIC NURSING.—Special study of areas such as behavior problems of children, projective tests, group therapy, mental hygiene clinics, etc. 3 s.h. ASSISTANT PROFESSOR ZUKOWSKI, AND MEDICAL STAFF IN PSYCHIATRY

134N-135N. ADVANCED MEDICAL AND SURGICAL NURSING.—A study of the medical and surgical aspects of selected diseases aimed at giving the student a better comprehension of the total care necessary to bring about the best possible results for patients. Lectures, discussions, case histories, and planned observation and experience with patients. 8 s.h.

ASSISTANT PROFESSOR INGLES AND MEDICAL STAFF

136N. SEMINAR IN MEDICAL OR SURGICAL SPECIALTY.—Directed study in a selected medical or surgical specialty. Each student works on a problem of major interest to her. Individual research in the collection of original material. 3 s.h.

ASSISTANT PROFESSOR INGLES

192N. PRINCIPLES AND METHODS OF TEACHING IN SCHOOLS OF NURSING.—The primary purpose of this course is to help teachers in schools of nursing to understand and to utilize generally accepted principles of learning and to carry out a more effective teaching program in a school of nursing. Instruction is given in the planning of courses, in methods of teaching in classrooms and in hospital divisions, in construction of examinations, and in the utilization of other methods of determining the effectiveness of a teaching program. 3 s.h.

ASSISTANT PROFESSOR RAPPAPORT

193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better to understand their functions in planning and managing a program on a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel, and a more adequate teaching program for students and others. 3 s.h.

ASSISTANT PROFESSOR INGLIS

195N. PERSONNEL WORK IN SCHOOLS OF NURSING.—The primary purpose of this course is to help head nurses and supervisors to develop greater understanding of the principles of human behavior and greater ability to apply these principles in working with patients and others on hospital divisions, and in establishing cooperative relationships with other departments of the hospital. 3 s.h.

ASSISTANT PROFESSOR JACOBANSKY

II. Degree of Master of Education with a Major in Nursing Education

(Not offered in 1954-1955)

ADMISSION

A student who wishes to work toward the degree of Master of Education with a major in Nursing Education must apply for admission to the Graduate School of Duke University. To be eligible for admission as a candidate for this degree she must meet the following requirements:

- (1) Graduation from an approved college or university with an average grade of not less than "B."
- (2) Satisfactory standing on the Graduate Record Examination.
- (3) Satisfactory standing on a test of mental ability.
- (4) Ability to write acceptable English as demonstrated on a test.
- (5) Graduation from an approved school of nursing.
- (6) Satisfactory ratings from three individuals, preferably former teachers and supervisors with whom the individual has had fairly recent contact.

OUTLINE OF PROGRAM

Basic Required Courses in Education:

	S.H.
300. Methods of Educational Research	3
304. The School as an Institution	3
305. The Nature, Function, and Reorganization of the Curriculum	3
317. The Psychological Principles of Education	3
	<hr/> 12

Courses in Nursing Education:

310. Organization and Administration of Schools of Nursing.....	4
311. Problems in Personnel Administration in Nursing.....	4
312. Research Problem.....	4
	<hr/>
	12
Minor, intra-departmental or extra-departmental.....	6
	<hr/>
	30

Candidates for the Master of Education degree must have had two years of experience including administration, supervision, or teaching in a school of nursing or nursing service organization when the degree is granted.

Tuition, Fees, and Other Expenses

FEES PER SEMESTER

A matriculation fee of \$20.00 is paid at the time of acceptance to Woman's College.

Tuition.....	\$175.00
General Fee (Undergraduate) including health, library and incidental fees.....	75.00
General Fee (Graduate School).....	60.00
Laboratory Fee (amount depends upon course which is taken)	

LIVING ARRANGEMENTS

Students may make their own arrangements to live in private homes or Woman's College dormitories.

EMPLOYMENT

A limited number of nurses may be employed at Duke Hospital during the time they are taking courses at Duke University. Nurses who are working full-time (44 hours per week) may take one course each semester. Nurses who wish to reduce hours of work per week to 36, with a corresponding reduction in salary, may take two courses each semester.

For information about employment write to the Director of Nursing Service, Duke Hospital.

Program in Psychiatric Nursing



A TWELVE-MONTH program in psychiatric nursing is offered to qualified graduate nurses. The primary objective of this program is to prepare individuals for head nurse position in psychiatric units of hospitals, child guidance clinics, and related fields. Students who wish to qualify for supervisory or teaching positions in the psychiatric field are advised to complete the program which leads to the degree of Bachelor of Science in Nursing Education.

Facilities for clinical teaching and experience include the psychiatric in-patient unit, the out-patient department, the psychosomatic service of Duke Hospital, child guidance clinics, and the State Hospital in Raleigh, N. C.

Students have approximately 20 hours per week of carefully planned laboratory practice on clinical services, during which time they work closely with patients presenting a wide variety of emotional disturbances. They also have an opportunity to participate in staff conferences and clinics at Duke Hospital and at the State Hospital in Raleigh.

Approximately 30 semester hours of credit toward the Bachelor of Science in Nursing Education degree may be earned during the calendar year.

A limited number of training stipends are available through the U. S. Public Health Service for those nurses who have demonstrated particular interest and aptitude in this field.

Requirements for admission are the same as for all students admitted to the program which leads to the degree of Bachelor of Science in Nursing Education.

OUTLINE OF PROGRAM (ONE YEAR)

Fall Semester	<i>Credits</i>
Educ. 130N Psychosomatic Nursing.....	4
Educ. 131N Psychiatric Nursing.....	4
Soc. 101 General Sociology.....	5
Educ. S4N Social Foundations of Nursing Education.....	3
	<hr/> 16
Winter Semester	
Educ. 132N Psychiatric Nursing.....	4
Educ. 133N Seminar in Psychiatric Nursing.....	3
Educ. 193N Ward Administration and Teaching.....	3
Educ. 118 Educational Psychology-Developmental.....	3
	<hr/> 12
Summer	
Educ. 120N Problem in Nursing Care.....	3

Program in Medical and Surgical Nursing



A TWELVE-MONTH program in medical and surgical nursing is offered to qualified graduate nurses. The primary objective of this program is to prepare individuals for head nurse positions in medical and surgical units of hospitals. Credit for the entire program applies toward the degree of Bachelor of Science in Nursing Education. Students who are interested in teaching and supervision in medical and surgical nursing are urged to complete all requirements for the degree.

OUTLINE OF THE PROGRAM

<i>Fall Semester</i>		<i>Credits</i>	<i>Spring Semester</i>		<i>Credits</i>
130N	Psychosomatic Nursing	4	193N	Ward Administration and Teaching	3
134N	Medical and Surgical Nursing	4	135N	Medical and Surgical Nursing	4
84N	Social Foundations of Nursing Education	3	117N	Community Nursing	3
	Elective	3-6		Elective	3-6
		<u>14-17</u>			<u>13-16</u>

SUMMER SESSION

S136N	Seminar in Medical and Surgical Nursing	3
S120N	Problem in Nursing Care	3

The courses in medical and surgical nursing and in psychosomatic nursing will include from four to 16 hours per week of field work in medical and surgical divisions and medical and surgical out-patient clinics of Duke Hospital, and with various community health and social agencies. Students who are interested in a particular medical or surgical specialty (orthopaedic nursing, neurosurgical nursing, etc.) may have added experience in that area during the summer months. For some students experiences in other hospitals may be arranged.

Requirements for admission are the same as for all students admitted to the program which leads to the degree of Bachelor of Science in Nursing Education.

Clinical Program in Operating Room Nursing

(Not offered in 1954-1955)



A PROGRAM in operating room nursing of nine months in length is offered to qualified graduate nurses who are interested in preparing for head nurse positions in an operating room.

ADMISSION

An individual who is interested in the program in operating room nursing must apply for admission to the Woman's College of Duke University as a *special* student. To be admitted as a special student the following records are required:

1. Transcript of high school or of college record.
2. Transcript of nursing school record.
3. Satisfactory rating from a nursing service administrator or supervisor with whom the applicant has had recent contact.

In addition to the above requirements an applicant must have had a minimum of six months' experience as an operating room nurse.

OUTLINE OF PROGRAM

*Courses in Nursing Education and Related Subjects

	<i>Credits</i>
84N. Social Foundations of Nursing Education.....	3
120. Problem in Nursing Care.....	3
193. Ward Administration and Teaching.....	3
195. Personnel Work in School of Nursing.....	3
Elective.....	3
	<hr/> 15

CLASSES AND RELATED EXPERIENCE IN OPERATING ROOM NURSING

The course in operating room nursing includes 60 hours of organized class work during the period of nine months and an average of 36 hours each week on duty, of which 18 hours is supervised experience. The class work includes a discussion of the facts and principles of chemistry, bacteriology, anatomy and physiology, underlying prepa-

* Credit toward the degree of B.S. in Nursing Education is given for these courses.

ration for and assistance with surgical operations, both general and special. The history of anesthesia is presented, as well as present day trends and developments in the field.

In the related field work the nurse becomes acquainted with the functions of various departments of the hospital and their relationship to the operating room. She has an opportunity to prepare for and assist with various surgical operations including general surgery, chest surgery, neuro-surgery, orthopaedic surgery, urological surgery, plastic surgery and eye, ear, nose and throat surgery. She is also given an opportunity to assist with administrative and supervisory functions in the operating room. and with planning and conducting a teaching program for students and others.

FEEES

Each student pays the regular University fees for courses in Nursing Education and related subjects. The fee per credit hour is \$12.00 (1949-50). In addition a matriculation fee of \$5.00 is paid each semester.

LIVING ARRANGEMENTS

Students who are taking the course in operating room nursing receive full maintenance in return for service to the hospital.

HEALTH CARE

Each student is required to carry hospitalization insurance to cover the cost of hospitalization during illness.

A sick leave of seven days is given during the nine months' period.

DATES OF ADMISSION

Students are admitted to the program in operating room nursing at the beginning of each semester.

CERTIFICATE

At the completion of the nine months' program in operating room nursing the student is granted a certificate.

INFORMATION

For further information about any program write to Director of the Division of Nursing Education, Duke Hospital, Durham, North Carolina. Application for admission to the Woman's College should be made to the Committee on Admissions, College Station, Durham, North Carolina.

BULLETIN
OF
DUKE UNIVERSITY



The Divinity School

ANNOUNCEMENTS FOR 1954-1955

VOLUME 26

May, 1954

NUMBER 7

Annual Bulletins

FOR GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

FOR BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

FOR BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

FOR BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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BULLETIN
OF
DUKE UNIVERSITY



THE DIVINITY SCHOOL

1953-54

ANNOUNCEMENTS FOR 1954-55

DURHAM, NORTH CAROLINA

1954



ENTRANCE TO THE DIVINITY SCHOOL

Calendar



1954

- September 20 Monday, 9:00 A.M.—Dormitories open for occupancy.
2:30 P.M.—Orientation program for new students.
4:00 P.M.—First regular Faculty meeting.
- September 21 Tuesday, 9:00 A.M.-1:00 P.M.—Registration of new students.
2:00 P.M.-5:00 P.M.—Registration of returning and transfer students.
6:30 P.M.—Physical Examinations of all new students, Duke Hospital.
- September 22 Wednesday, 9:00 A.M.-5:00 P.M.—Registration of returning and transfer students.
2:00 P.M.-5:00 P.M.—Placement tests for all new students.
- September 23 Thursday, 8:30 A.M.—Instruction begins for fall semester.
10:30 A.M.—Formal opening exercises.
- October 2 Saturday—Last day for changing courses for fall semester.
- November 24 Wednesday, 5:30 P.M.—Thanksgiving Recess begins.
- November 29 Monday, 2:00 P.M.—Thanksgiving Recess ends.
- December 11 Saturday—Founders Day
- December 17 Friday, 5:30 P.M.—Christmas Recess begins.

1955

- January 3 Monday, 2:00 P.M.—Instruction is resumed.
- January 12, 13, and 14 Wednesday, Thursday, and Friday—Registration of resident students for second semester.
- January 18 Tuesday—Mid-year examinations begin.
- January 28 Friday—Mid-year examinations end.
- February 1 Tuesday—Registration for second semester of students not in residence during first semester, last day for matriculation for the spring semester.
- February 2 Wednesday, 8:30 A.M.—Second semester begins.
- February 11 Friday—Last day for changing courses for second semester.
- March 25 Friday, 5:30 P.M.—Spring vacation begins.
- April 4 Monday, 2:00 P.M.—Instruction is resumed.
- April 13 Wednesday, 7:00 P.M.—English Bible examination in Old Testament.
- April 21 Thursday, 7:00 P.M.—English Bible examination in New Testament.
- May 23 Monday—Final examinations begin.
- June 2 Thursday—Final examinations end.
- June 4 Saturday—Commencement begins.
- June 5 Sunday, 11:00 A.M.—Commencement Sermon
7:30 P.M.—Divinity School Closing Exercises.
- June 6 Monday—Commencement Address, Graduating Exercises.

Officers of Administration



General Administration

ARTHUR HOLLIS EDENS, Ph.D., LL.D.
President of Duke University

WILLIAM HANE WANNAMAKER, A.M., LL.D.
Vice-Chancellor of the University

PAUL MAGNUS GROSS, Ph.D.
Vice-President in the Educational Division

CHARLES EDWARD JORDAN, A.B., LL.D.
*Vice-President in the Division of Public Relations,
and Secretary of the University*

HERBERT JAMES HERRING, A.M., LL.D.
Vice-President in the Division of Student Life

ALFRED SMITH BROWER, A.B.
Business Manager and Comptroller

CHARLES BLACKWELL MARKHAM, A.M.
Treasurer of the University

COMMITTEE OF THE BOARD OF TRUSTEES ON THE DIVINITY SCHOOL
W. W. PEELE, H. B. PORTER, N. E. EDGERTON,* W. A. STANBURY

Educational Administration

JAMES CANNON, A.M., Th.M., D.D.
Dean of the Divinity School

HELEN MILDRED KENDALL, A.B.
Administrative Assistant and Secretary of the Faculty

DONN MICHAEL FARRIS, B.D., M.S.
Librarian

ARLEY JOHN WALTON, B.S.L., D.D.
Director of Field Work

Staff

ELIZABETH COLE ROETIGER
Secretary to the Dean

MARGARET SETZER GRILL, A.B.
Receptionist and Secretary

DORALYN HICKEY, M.A.
Assistant in the Library

* Died March 20, 1954.

Faculty



JAMES CANNON, A.M., Th.M., D.D.
*Dean of the Divinity School and Ivey Professor of the History of
Religion and Missions*

JAMES FOSTER BARNES, A.M.
Lecturer in Church Music

WALDO BEACH, B.D., Ph.D.
Professor of Christian Ethics

WILLIAM HUGH BROWNLEE, Th.M., Ph.D.*
Assistant Professor of Old Testament

JOHN CHAMBERLAIN, A.M.
Visiting Instructor in Biblical Studies

KENNETH WILLIS CLARK, B.D., Ph.D.†
Professor of New Testament

JAMES T. CLELAND, M.A., S.T.M., D.D.
Professor of Preaching

ROBERT E. CUSHMAN, B.D., Ph.D.
Professor of Systematic Theology

WILLIAM DAVID DAVIES, B.D., M.A., D.D.
Professor of Biblical Theology

RUSSELL L. DICKS, B.D., D.D., Litt.D.
Associate Professor of Pastoral Care

ANDREW DURWOOD FOSTER, B.D.
Assistant Professor of the History and Philosophy of Religion

EDGAR BEAUREGARD FISHER, B.D.
Lecturer in Practical Theology

FRANKLIN SIMPSON HICKMAN, A.M., S.T.B., Ph.D., D.D.
Professor Emeritus of Psychology of Religion

WILLIAM ARTHUR KALE, B.D., D.D.
Professor of Practical Theology

HELEN MILDRED KENDALL, A.B.
Administrative Assistant and Secretary of the Faculty

CREIGHTON LACY, B.D., Ph.D.
Assistant Professor of Missions and Social Ethics

HIRAM EARL MYERS, S.T.M., D.D.
Professor of Biblical Literature

JESSE MARVIN ORMOND, B.D., D.D.
Professor Emeritus of Practical Theology

RAY C. PETRY, Ph.D., LL.D.
Professor of Church History

McMURRY SMITH RICHEY, B.D.
Assistant Professor of the Philosophy of Christian Education

* On sabbatical leave fall semester, 1954-55.

† On sabbatical leave, 1954-55.

GILBERT THEODORE ROWE, S.T.D., D.D., Litt.D.
Professor Emeritus of Christian Doctrine

EDWIN KELSEY REGEN, B.D., D.D.
Lecturer in Practical Theology

JOHN JESSE RUDIN, II, B.D., Ph.D.
Associate Professor of Speech

THOMAS ANTON SCHAFER, B.D., Ph.D.
Assistant Professor of Historical Theology

HILRIE SHELTON SMITH, Ph.D., D.D., Litt.D.
James B. Duke Professor of American Religious Thought

HERSEY EVERETT SPENCE, A.M., B.D., D.D., Litt.D.
Professor Emeritus of Religious Education

WILLIAM FRANKLIN STINESPRING, M.A., Ph.D.
Professor of Old Testament

ARLEY JOHN WALTON, B.S.L., D.D.
Associate Professor of Practical Theology and Director of Field Work

GEORGE RILEY EDWARDS, B.D.
Teaching Fellow in New Testament Greek

ROBERT GRANVILLE GARDNER
Assistant in Preaching

Committees of the Faculty

Admissions and Scholarship: Cannon, Walton, Kale, Petry, Kendall.

Advisors to Students: Cannon, Dicks, Walton, Rudin.

Alumni: Myers, Barnes, Richey.

Chapel Services and Spiritual Life: Cushman, Stinespring, Rudin, Davies, Richey.

Curriculum and Senior Seminars: Petry, Cannon, Stinespring, Kendall, Cushman, Kale.

Divinity School Bulletin: Cleland, Petry, Brownlee, Schafer, Foster, Lacy.

Divinity School Seminars: Cannon, Cushman, Myers, Kale, Beach.

Library: Stinespring, Davies, Foster, Lacy, Farris.

Public Exercises: Smith, Beach, Cleland, Davies, Brownlee.

Registration and Schedule: Kendall, Stinespring, Beach, Rudin, Kale, Schafer, Richey.

Social: Cleland, Davies, Lacy, Foster, Richey.

JOINT AND SPECIAL COMMITTEES

Convocation: Cannon, Kale, Walton, Rudin.

James A. Gray Lectures: Cannon, Cleland, Cushman, Smith, Davies.

School for Approved Supply Pastors: Kale, Walton, Cannon, Richey.

Joint Scholarship Committee: Cannon, Walton, Dozier.

Joint Summer Session Committee: Cannon, Petry, Smith, Kendall, Clyde.

Joint Phillips Brooks Club Committee: Schafer, Farris, Rudin, Robert L. Costner, E. T. Browne.

General Information



HISTORICAL STATEMENT

THE Indenture of Trust signed on December 11, 1924, by Mr. James B. Duke, which established Duke University, mentioned first among its objects the training of ministers of the Gospel. The Divinity School was, accordingly, the first of the graduate professional schools to be organized. Its work began with the year 1926-27, the formal opening exercises being held on November 9, 1926.

The Reverend Doctor Edmund Davison Soper was the first dean of the Divinity School. He resigned in 1928 to become President of Ohio Wesleyan University, and was succeeded by the Reverend Doctor Elbert Russell, and the latter in turn in 1941 by the Reverend Doctor Paul Neff Garber. In 1944, Dean Garber was elected to the episcopacy of the Methodist Church, and Doctor Harvie Branscomb assumed the duties of the dean's office. In 1946, Dean Branscomb became Chancellor of Vanderbilt University, and in 1947 the Reverend Doctor Paul E. Root was elected dean but died before he could assume the office. The Reverend Doctor Harold A. Bosley became dean in 1947 and resigned in 1950 to become the pastor of the First Methodist Church, Evanston, Ill. The Reverend Doctor James Cannon was appointed Dean of the Divinity School March 1, 1951.

THE PURPOSE OF THE DIVINITY SCHOOL

The primary purpose of the Divinity School is to provide training for individuals planning to enter the Christian ministry. This includes not only prospective ministers in local churches, but also those preparing themselves to be missionaries at home and abroad, Directors of Christian Education, teachers of religion, chaplains, and social workers. Vital to all of these forms of service is a full understanding of the beginnings, content, and history of the Christian faith and its special pertinence for the spiritual needs of the modern world. Studies of a broad and thorough character directed toward such an understanding constitute the center of the curriculum of the Divinity School and are regarded as the basic training for all prospective Christian workers. Specific training in the skills required of local ministers and of leaders in the work of Christian Education are also provided. As funds become available for the purpose and as needs appear, additional training in specialized skills and areas of knowledge will be added to the curriculum.

Though bound by ties of history and obligation to the Methodist Church, the Divinity School is ecumenical in its interests and outlook. Its faculty is limited to no one denomination, but draws upon the resources of them all. Students of the several denominations are admitted on the same basis. The Divinity School conceives its task to be one of broad service to the Church in all of its forms.

THE RELATION OF THE DIVINITY SCHOOL TO DUKE UNIVERSITY

The Divinity School is an integral unit of the University and shares fully in its activities, privileges, and responsibilities. The Sunday services in the University Chapel give Divinity School students an opportunity to hear each year a number of leading ministers of the country. The University Libraries make easily accessible a rich collection of 1,100,000 volumes. Selected courses in the Graduate School of Arts and Sciences and in the professional schools are open to Divinity School students without payment of additional fees. The general cultural and recreational resources of the University are available to them on the same basis as to other students.

LIBRARY RESOURCES

The Divinity School has its own library containing over sixty-eight thousand volumes. It is rich in complete files of the more important religious journals and periodicals, in source materials, particularly for the study of medieval and American church history, Judaism, missions and the history of religion, and in facsimiles of the more important manuscripts of the New Testament. Among the most treasured possessions of the Library are twenty-one Greek manuscripts of the eleventh to seventeenth centuries. Twelve are Greek New Testament, of which one is a magnificent manuscript of the thirteenth or fourteenth century, containing the entire text of the New Testament; four are liturgical manuscripts containing material valuable for studies in the New Testament and church history.

The combined libraries of the University contain over 1,100,000 volumes. The General Library of the University is connected by a corridor with the Divinity School Building. It contains seven hundred thousand volumes and receives the current issues of several thousand periodicals, more than two hundred of which are in the field of religion. The General Library contains also a catalogue of the library of the University of North Carolina located at Chapel Hill, twelve miles away, and a system of exchange operates between the two libraries, so that books may be secured from that library also within a few hours.

The Henry Harrison Jordan Loan Library was endowed in 1947 by the children of the late Reverend Henry Harrison Jordan, for the purpose of providing ministers in the field with the best of current reli-

gious literature. This collection was an outgrowth of the Duke Divinity School Loan Library established in 1944.

RELIGIOUS AND SOCIAL LIFE

One of the most important aspects of a program of training for religious service is the development of a warm and discriminating spiritual experience. The center of the corporate life of the Divinity School is its own place of worship, York Chapel. Regular chapel services are held, at which all students are expected to be present. Services are led by members of the faculty, by visiting ministers, and by members of the student body. Ordination and other special services are held upon occasion. On each Sunday morning services are held in the University Chapel.

In 1952 the Doris Duke Foundation gave funds for the purchase and installation of a pipe organ in York Chapel.

The student body of the Divinity School is united by a strong sense of fellowship and common interest. Student committees organize and supervise social projects and missions of preaching, jail visitation, and related enterprises. Opportunities for occasional preaching are always available.

PUBLIC LECTURES

The Divinity School presents a number of public lectures annually. The lectures for 1953-54 were: Dr. Henry M. Bullock, Editorial Secretary of the Methodist Board of Education; Dr. Norman Dunning of the Interseminary Movement; Dr. John O. Gross of the Board of Education of the Methodist Church; Dr. Nolan B. Harmon, Book Editor of the Methodist Church and editor of the journal, *Religion in Life*; the Reverend Charles Jones, pastor of the Community Church, Chapel Hill, N. C.; Dr. Gerald McCulloh of the Board of Education of the Methodist Church; Dr. Nathaniel Micklem, Principal Emeritus of Mansfield College, Oxford; Dr. H. Richard Niebuhr of the Yale Divinity School; Dr. Allyn Robinson of the National Conference of Christians and Jews; Dr. Ralph W. Sockman, pastor of Christ Church (Methodist) of New York; Mr. Aiken Taylor, of Alcoholics Anonymous; Dr. Robert Thouless, of England; Dr. Karl Quimby, Dr. Glen Stanford, Dr. Olin Stockwell, former missionary in Communist China, and Dr. M. O. Williams, all of the Methodist Board of Missions.

THE DIVINITY SCHOOL LIBRARY LECTURES

In 1948 the Duke Divinity School Library Lectures were established by the Reverend George Brinkmann Ehlhardt for the purpose of bringing to the Divinity School a succession of great religious leaders. The following lecturers have appeared:

1948: The Reverend Doctor William Warren Sweet. 1949: The

Reverend Doctor George Dunbar Kilpatrick. 1949: The Reverend Doctor Wilhelm Pauck. 1950: The Reverend Doctor John Cecil Trever. (This lecture was given in connection with the exhibition of three ancient Hebrew scrolls lent by His Eminence, Mar Athanasius Yeshue Samuel, Metropolitan and Archbishop of Jerusalem and Trans-Jordan). 1951: Bishop Paul Neff Garber. 1953: Dr. Roland H. Bainton.

THE JAMES A. GRAY LECTURES

The James A. Gray Lectures were established in 1950, and the first series was given by Dr. Ralph W. Sockman, pastor of Christ Church (Methodist) of New York, during The Christian Convocation. The second series of these lectures was given at the 1951 Convocation by Dr. Paul E. Scherer of Union Theological Seminary, New York. The third series was given at the Convocation of 1952 by Dr. Liston Pope, Dean of Yale Divinity School. Dr. Charles W. Gilkey, Dean Emeritus of the Chapel of the University of Chicago, delivered the fourth series at the 1953 Convocation. Dr. Henry P. VanDusen, President of Union Theological Seminary, N. Y. was the lecturer in 1954.

THE CHRISTIAN CONVOCATION

The Christian Convocation of 1954 was held on the Duke campus from June 8-11. The Convocation, under the joint sponsorship of the Duke Divinity School, The North Carolina Pastors' School, and The Department of In-Service Training of the Board of Education of the Methodist Church, brought to the campus an outstanding group of religious leaders as lecturers and teachers. President Henry P. VanDusen delivered the fifth series of the James A. Gray Lectures. Dr. Pierce Harris was Convocation Preacher.

COURSES OF STUDY OFFERED BY THE DIVINITY SCHOOL

The Divinity School offers two courses of study. The basic course is that which leads to the degree of Bachelor of Divinity. This is a three-year course and is recommended to all those preparing themselves for the work of the regular pastoral ministry. Students who hold pastoral charges, or other remunerative work requiring any substantial time apart from their studies, may carry only reduced schedules of work, and, in most cases, unless work is taken in the Duke University Summer Session, will spend four years in completion of the requirements for the B.D. degree.

The Divinity School offers also a course of study leading to the degree of Master of Religious Education. This course is designed for individuals who wish to become directors or to take other specialized positions in the work of Christian Education. The course does not provide a general preparation for the work of the regular ministry and

cannot serve as a substitute for it. No exchange of credits between the two courses is permitted, nor can departmental courses taken be credited toward more than one degree. Only a limited number of candidates for the Master of Religious Education degree will be accepted annually.

The requirements for each of these degrees are stated on pages 16 through 25 of this catalogue.

COURSES OF STUDY IN RELIGION OFFERED BY THE GRADUATE SCHOOLS OF ARTS AND SCIENCES

Students who desire to pursue work in religion beyond that for the Bachelor of Divinity degree should register in the Graduate School of Arts and Sciences, through which the degrees of Master of Arts and Doctor of Philosophy in Religion may be obtained. This advanced work is administered through the Department of Religion of the Graduate School and is available to qualified persons of all denominations on an equal basis. Study and research may be pursued in three fields: (1) Biblical Studies; (2) Studies in Church History; and (3) Studies in Christian Thought. A list of courses approved by the Graduate Council for work in these fields, together with general requirements for admission to the Graduate School, may be found in the *Bulletin of the Graduate School*. This Bulletin is available on application to the Dean of the Graduate School of Arts and Sciences, Duke University.

A limited number of University Scholarships and Fellowships, among which are four Gurney Harriss Kearns Fellowships of \$1,200 each, may be obtained by exceptionally qualified students. Applications for these must be submitted to the Dean of the Graduate School on University forms not later than March 1 of each year.

Inquiries concerning specific requirements of the Department of Religion in the Graduate School should be addressed to Professor H. Shelton Smith, Director of Graduate Studies in Religion.

FACILITIES FOR ADVANCED STUDY IN THE AMERICAN SCHOOLS OF ORIENTAL RESEARCH

The Divinity School of Duke University is one of the supporting members of the American Schools of Oriental Research. Accordingly, students in the Divinity School have the privilege of attending the American School in Jerusalem or the one in Bagdad without charge for tuition. They may also compete for the financial aids which are offered annually by the Schools. These consist of four fellowships, the stipends depending upon available funds.

DIVINITY SCHOOL SEMINARS

The Divinity School, under provision of the James A. Gray fund, conducts each year two extension seminars providing two-day study

courses for ministers. In 1953-54 seminars were conducted at Myers Park Methodist Church, Charlotte, N. C. and St. Paul Methodist Church, Goldsboro, N. C. Lecturers were Dr. Frederick C. Grant and Dr. Kenneth W. Clark.

SCHOOL FOR APPROVED SUPPLY PASTORS

In cooperation with the Department of In-Service Training of the Board of Education and the Southeastern Jurisdictional Conference of the Methodist Church, the Divinity School conducts a School for Approved Supply Pastors of the Methodist Church. The school for 1954 is scheduled for July 20-August 6.

STUDENT GOVERNMENT ASSOCIATION

Each student of the Divinity School upon enrollment becomes a member of the Student Government Association. Four officers are elected by the student body annually in April to serve for the following year. These officers, the President, Vice-President, Secretary, and Treasurer, along with the Dean of the Divinity School, serve as the Executive Committee, and the committee chairmen constitute the Student Council, which meets in monthly session to review and coordinate the programs of the several committees. It is desired that all students contribute to the corporate life of the School through active participation in the work of the committees. The Association operates on the basis of a unified budget, each student contributing to its support dues in the amount of \$5.00 per year, payable at the time of fall registration; \$2.50 at spring registration for students who enter at that time.

Admission and Requirements for Degrees



Requirements for Admission

THE Divinity School is a fully accredited member of the American Association of Theological Schools, and is one of the ten accredited seminaries of the Methodist Church. Candidates for admission must hold the degree of A.B., or its equivalent, based upon four years of work beyond secondary education, in a college which is approved by one of the regional accrediting bodies, and their college records must be such as to indicate their ability to carry on graduate professional studies. They will be admitted without examination on presentation of an official transcript of college and all other academic credits which they may have secured. Women will be admitted on the same basis as men.

Applications may be rejected where transcripts show a considerable number of low grades even though the applicant may have eventually received a degree based upon a bare "C" average, especially where the applicant has required longer than the normal eight semesters of college work. Papers filed with applications are not returned.

The applications of students from foreign countries will be considered, each on its own merits, the general principle being that a training equivalent to that of a baccalaureate degree from an accredited American college must have been secured.

The Divinity School accepts a few students who desire to transfer from other accredited theological schools, provided they have not accumulated more than 30 semester hours of credit elsewhere. Admission will be on the basis of transcripts of their work and honorable dismissal. However, all transfer students will be expected to meet the full requirements of the Divinity School and should recognize the fact that there may be loss of time in conforming to these requirements. Credits will be formally accepted only after the student has spent one semester in the Duke Divinity School.

In addition to an adequate academic preparation, applicants must satisfy the Faculty as to their Christian character and purpose. A formal application blank may be secured from the office of the Divinity School. This must be filled out and returned by all candidates for admission. Application for admission should be made as soon as

possible after the beginning of the applicant's last semester of college work. Applications received after April 1 cannot be assured of admission or financial aid for the ensuing academic year.

All persons admitted to the Divinity School are required to report to the Student Health Service, Duke Hospital, for physical examination on days and at hours specified at the time of matriculation. They are also required to take certain tests administered by the Bureau of Testing and Guidance.

Persons who do not matriculate at the time for which they were originally admitted are required to secure written approval for later matriculation. A student who withdraws from the Divinity School and desires to return at a later date must file with the Dean a written request for a leave of absence.

The number of applications for admission to the School is considerably larger than the number of vacancies. In view of this fact, applicants are required on notification of admission to signify their acceptance within two weeks, and to pay an admission fee of \$15.00. (Make check payable to Treasurer of Duke University and send to the Office of the Dean of the Divinity School.) This fee is applied to the regular first-term bill if the student matriculates; if he fails to do so, the fee is forfeited.

Under the terms of the Selective Service Act, as it now stands, pre-enrollment for later formal admission may be granted to persons who meet the Divinity School standards and requirements for admission. Applications for pre-enrollment may be addressed to the Office of the Dean. Pre-enrolled students must send transcripts of each year's college work by June 15th of each year in which they are pre-enrolled. Pre-enrollment does not guarantee formal admission, and a person who has been pre-enrolled for any length of time must send a transcript of work by April 1 of the year in which admission is sought for the ensuing academic year. This must be accompanied by a letter from the college dean or other approved reference certifying to good character and conduct. The admission fee of \$15.00 is due within two weeks of receipt of notice of formal admission.

ADMISSION ON PROBATION

1. Applicants for admission who are graduates of non-accredited colleges will be considered on their merits, but only those who give evidence of special promise will be admitted. Specifically, such applicants must show that they have attained a superior average (approximately "B") for a four-year college course.

Admission of such persons will, in every case, be *on probation*.

2. Applicants for admission who are graduates of accredited colleges but whose college transcripts do not fully meet Divinity School

standards may be admitted *on probation* if their recommendations justify consideration.

Probation means:

a. Students who, during the first year of Divinity School work (thirty semester hours), maintain a consistently low average, including one or more failures, will be required to withdraw from the school.

b. Students admitted on probation may carry only limited schedules of work, the amount to be determined by the Dean.

c. In the case of a student admitted on probation, no credit will be granted for any course in which, during the first year's work (thirty semester hours), a grade of less than "C" (see catalogue section on "grading system") is recorded, unless the student's entire average in the year during which a "D" grade is received is "C" or better.

d. When the student has been admitted on probation, and is subsequently found to be deficient in the essential requisites of any given area of the "Pre-Seminary Curriculum" (see next section of catalogue), the Divinity School Faculty reserves the right to direct that the student make up such deficiencies by additional courses of study taken in other schools of Duke University in order to qualify for either the B.D. or M.R.E. degree, but without credit for such courses toward those degrees.

PRE-SEMINARY CURRICULUM

The Divinity School, in substantial agreement with the standards of the American Association of Theological Schools, recommends that prospective candidates for admission keep in mind the desirability of including the following in their undergraduate curriculum:

It is suggested that a student should acquire a total of 90 semester hours or complete approximately three-fourths of his college work in the areas listed below. No work done towards a first college degree may be used towards a Divinity School degree.

<i>Basal Fields</i>	<i>Semester</i>	<i>Sem. Hours</i>
English	6	12-16
Literature, composition and speech		
Philosophy	3	6-12
At least two of the following:		
Introduction to philosophy, history of philosophy, ethics, logic		
Bible or Religion	2	4-6
History	3	6-12
Psychology	1	2-3
A foreign language	4	12-16
Greek, Latin, and German are especially recommended.		
Natural sciences	2	4-6
Physical or biological		
Social sciences	2	4-6

At least two of the following:

Economics, sociology, government or political science, social psychology, education.

Concentration of work, or "majoring," is a common practice in colleges. For such concentration or major, a constructive sequence based upon any one, two, or three of the above fields of study would lead up naturally to a theological course.

Of the various possible areas of concentration, where areas of concentration are required, a major in English, philosophy, or history is regarded to be the most desirable.

Requirements for the Degree of Bachelor of Divinity

The requirements for graduation stated in this catalogue apply to all students entering the Divinity School as of June 1, 1954. Students who entered prior to that time may graduate under the new plan or under the curriculum which was in force at the time of their original entrance.

The requirements for the degree of Bachelor of Divinity fall into six categories as follows:

I. Required Courses, to be taken by all candidates for the degree.

11. Introduction to the Old Testament I	3 s.h.
12. Introduction to the Old Testament II	3 s.h.
18. Early Christian Life and Literature	4 s.h.
19. Introduction to New Testament Theology	3 s.h.
13. History of the Church through the Protestant Reformation	4 s.h.
20. Introduction to Christian Theology	4 s.h.
29-30. Sermon Construction—Theory and Practice	4 s.h.
17. Effective Speaking	2 s.h.

II. Limited-Selective Courses.

These may be used also as free electives after the limited-selective requirements have been met.

1. Two of the following three courses required:

22. The Philosophy of Christian Education	3 s.h.
31. Introduction to Philosophy of Religion	3 s.h.
27. Christian Ethics I	3 s.h.

2. Two of the following three courses required:

28. Movements in American Religious Thought	3 s.h.
14. History of the Modern Church	2 s.h.
21. Introduction to the History of Christian Doctrine	2 s.h.

3. Three of the following four courses required (Students will note special requirements of each Vocational Group):

23. Church Administration I	2 s.h.
24. Philosophy of Christian Missions	2 s.h.
25. Educational Theory and Practice in the Church	2 s.h.
26. Introduction to Pastoral Care	2 s.h.

III. Vocational Groups.

Each student, not later than the end of the middle year, will choose one of the five Vocational Groups listed on Page 21 and will meet the vocational requirements of the group chosen.

IV. Senior Seminars.

Each student will elect one of the Senior Seminars listed on Page 35.

V. Free Electives.

The student will choose a sufficient number of courses to make up the total

of 90 semester hours required for graduation. Language courses count as free electives.

VI. English Bible. Demonstration of a detailed knowledge of the contents of the narrative portions of the English Bible. Examinations for this purpose in Old and New Testament are given each spring. (See Calendar for exact dates.)

Students who show deficiencies in English will be required to take special training in addition to meeting the other requirements for the degree. A degree may be withheld on the grounds of English deficiency only.

By special permission a student who has begun his work in the Divinity School as a candidate for the B.D. degree may be given credit for not more than 30 semester hours of work taken in another seminary on the approved list of the American Association of Theological Schools. Except in unusual cases, request for such credits must be approved prior to the beginning of work at the other institution. In every such case, however, the final 15 hours of class credit presented for graduation must be done at Duke and must include satisfactory completion of one of the Senior Seminars. No such student will be relieved of any of the requirements for graduation specified in the catalogue of the Divinity School.

Unless all the work offered for the B.D. degree is completed within a period of nine years from the date of beginning, the student will be required to make formal application for re-admission and re-evaluation of his credits in the light of the then-existing curriculum of the Divinity School. Except in unusual cases, work of a fragmentary character taken over a long period of years, or work taken many years before a student is admitted to the Divinity School, will not be accepted for credit toward the B.D. degree.

Not over 30 semester hours of Summer Session work may be credited toward the degree of Bachelor of Divinity.

In view of the fact that enrollment must be limited, persons who have already received the B.D. degree from Duke or elsewhere will not be admitted to the Divinity School except as special students in the Summer Session.

Distribution of Courses by Years

FIRST (JUNIOR) YEAR

<i>First Semester</i>	<i>Semester Hours</i>	<i>Second Semester</i>	<i>Semester Hours</i>
11. Introduction to the Old Testament I	3	18. Early Christian Life and Literature	4
13. History of the Church through the Protestant Reformation	4	20. Introduction to Christian Theology	4
17. Effective Speaking	2	†22. The Philosophy of Christian Education	3
†31. Introduction to Philosophy of Religion	3	†24. Philosophy of Christian Missions	2
Field Work Seminar (For those doing field work)	1	English Bible Examinations	0
*Electives	2 or 3	*Electives	2 or 3
	<hr/> 15 or 16§		<hr/> 15 or 16§

SECOND (MIDDLE) YEAR

<i>First Semester</i>	<i>Semester Hours</i>	<i>Second Semester</i>	<i>Semester Hours</i>
19. Introduction to New Testament Theology	3	12. Introduction to the Old Testament II	2†
†21. Introduction to the History of Christian Doctrine	2	†14. History of the Modern Church	2
†25. Educational Theory and Practice in the Church	2	†23. Church Administration I	2
†27. Christian Ethics I	3	†26. Introduction to Pastoral Care	2
29. Sermon Construction—Theory	2	†28. Movements in American Religious Thought	3
*Electives	2 or 3	30. Sermon Construction—Practice	2
	<hr/> 14 or 15§	*Electives	2 or 3
			<hr/> 15 or 16§

* Language counts as elective.

† Limited-Elective (See statement on previous page).

‡ 3 hours after 1954-55.

§ A student who secures credit for 15 s.h. each semester will be in line for graduation at the end of three academic years.

Schedule of Required and Limited-Elective Courses

Not over three additional hours may be scheduled in any one semester.

FIRST YEAR—FIRST SEMESTER

<i>Hour</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
8:30						
9:30		C. H. 13	C. H. 13	C. H. 13	C. H. 13	
10:30		Chapel	Chapel	Chapel	Chapel	
11:00		†Phil. R. 31	Assembly	†Phil. R. 31	†Phil. R. 31	
12:00		Speech 17†		Speech 17†		
2:00	O. T. 11	C. A. 142*	O. T. 11	C. A. 144*	O. T. 11	

FIRST YEAR—SECOND SEMESTER

<i>Hour</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
8:30						
9:30		Theol. 20	Theol. 20	Theol. 20	Theol. 20	
10:30		Chapel	Chapel	Chapel	Chapel	
11:00		†Phil. C. Ed. 22	Assembly	†Phil. C. Ed. 22	†Phil. C. Ed. 22	
12:00			†H. R. 24		†H. R. 24	
2:00		N. T. 18	N. T. 18	N. T. 18	N. T. 18	

*Students doing any kind of field work will choose one of these seminars.

†Additional sections of Speech are available.

†Limited-Elective.

SECOND YEAR—FIRST SEMESTER

<i>Hour</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
8:30						
9:30		†C. Ed. 25	†H. T. 21	†C. Ed. 25	†H. T. 21	
10:30		Chapel	Chapel	Chapel	Chapel	
11:00		†C. E. 27	Assembly	†C. E. 27	†C. E. 27	
12:00		Preaching 29		Preaching 29		
2:00		N. T. 19	N. T. 19	N. T. 19		

SECOND YEAR—SECOND SEMESTER

<i>Hour</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
8:30						
9:30		†C. A. 23	†Pastoral Care 26	†C. A. 23	†Pastoral Care 26	
10:30		Chapel	Chapel	Chapel	Chapel	
11:00		†Am. Rel. Th. 28	Assembly	†Am. Rel. Th. 28	†Am. Rel. Th. 28	
12:00		Preaching 30		Preaching 30		
2:00		†C. H. 14	O. T. 12	†C. H. 14	O. T. 12	

† Limited-Electives.

THIRD (SENIOR) YEAR

Vocational Groups. One of these will be chosen by every B.D. candidate not later than the end of the Middle Year.

The student will also elect one Senior Seminar: he may not take more than one without special permission of the Dean. The Seminar will carry credit of two semester hours.

Electives in sufficient amount to complete 90 hours for graduation will be taken.

I. THE PREACHING MINISTRY AND PASTORAL SERVICE.

The student will plan his program so as to include:

Christian Education 25 and either 158 or 160 through 166.

Church Administration 23 and one additional course in that field.

Pastoral Care 26 and one additional course in that field.

Missions 24 and one course in Christian Ethics.

History of Religion, one course.

Speech 132 (for those found deficient in Speech and Preaching).

II. CHRISTIAN EDUCATION.

The student should plan his course so as to include: Six courses distributed between the fields of Church Administration and Christian Education, one of which must be Christian Education 22, 125, or 129; one Church Administration 23 and one Christian Education 25.

III. MISSIONS.

The student should plan his program so as to include Missions 24 and 133, one course in the History of Religion, one course in Christian Ethics; plus such courses as may be recommended by the instructor in Missions on the basis of each student's needs, interests, and previous choices.

IV. CHAPLAINCY: HOSPITAL, MILITARY, AND OTHER.

The student should plan his program so as to include Pastoral Care 26, 170, 174, 177, and either 171 or 172 and one course either in Philosophy of Religion or one of the following courses in Christian Education: 22, 125, or 129.

V. TEACHING AND RESEARCH IN RELIGION.

During the senior year, those choosing Vocational Group V must take one course from each of five fields drawn from the following ten:

American Religious Thought

Bible (may be language)

Christian Ethics

Church History

Historical Theology

Missions and Social Ethics

Christian Education

Christian Theology

Biblical Theology (O.T. 101, 301,

310, N.T. 116, 311, 312, 319)

History and Philosophy of

Religion

ADMINISTERING THE CURRICULUM

For the administration of the curriculum the following regulations have been adopted:

Full-time students will take the required courses and limited-electives as specified for the respective semesters, being limited to the amount of free-elective work indicated in each term. The only exceptions are as specified in the provision for languages.

Since the four-day-a-week schedule and the free week-ends have been planned with special reference to the needs of students holding pastoral charges, such students are permitted, but not required, to carry the total of hours of the required work for the first four semesters,

but free-electives may not be taken until all the required work has been scheduled. The amount of work allowed in the last two semesters will be governed by the same principle. Such students may not carry more than the required work or its equivalent without special permission of the Dean. A student who does not do creditable work will be required to reduce his schedule. The schedules of all students are subject to the approval of the Dean.

The status of "special student" may not be granted simply to permit avoidance of the schedule of required courses. Every request for this classification will be carefully investigated and approval voted in each case by the Curriculum Committee in the cases of students already admitted to the Divinity School, and by the Admissions Committee in the case of applicants for admission as "special students."

A fee of \$10.00 is charged for auditing any course except where a student is already paying regular University fees. Permission to audit requires the approval of the Dean and the instructor concerned.

Students working under or assisted by the Duke Endowment, or by Divinity School funds are required to take one of the Field Work seminars. This work will be taken in the first semester of the first year.

For a student taking both Greek and Hebrew, the Greek may be continued in the second year by postponing one or both of the required courses in Old and New Testament. In such cases, the Hebrew will be the free elective in that year.

A part-time student who desires to begin the study of Greek in the first year may postpone the required course in Old or New Testament.

Suitable entry will be made on the permanent record of any student who is granted permission to deviate from the requirements in the matter of language.

It is the responsibility of each student to see that he meets all requirements for graduation, and to take his courses in proper sequence. He is also responsible for seeing that any special permission granted him to deviate from the normal program is properly recorded in his personal file. Members of the Faculty have no authority to grant deviations unless these are stated in a letter from the instructor in question to the Dean and approved by him; these to be added to the student's permanent record.

GRADING SYSTEM

The grading system of the Divinity School employs the letters A, B, C, D, and F, which have been defined as follows: A = Excellent; B = Good; C = Acceptable; D = Poor; F = Failure; WP = Withdrew Passing; WF = Withdrew Failing; and Inc. = Incomplete. (See below.) No percentage equivalents are stated. A student is expected to maintain an average of C.

The Faculty has voted that in the average course of considerable size, especially required courses, the total of A and B grades should not run above $33\frac{1}{3}\%$. In all courses where the instructor considers attendance a necessary part of the work of the course, a student may not receive a grade of over C if his absences total 12% of the regular class periods, and if the absences total 24% of the class periods he may not receive credit for the course.

Grades of Incomplete received at the end of the fall semester must be removed by the completion of the work of the course not later than March 15. Grades of Incomplete received at the end of the spring semester must be removed by October 1. If the work of the course is not completed by these dates, the grades shall be recorded as "F."

No student shall be permitted to drop a course after the expiration of one-third of the period of instruction of the course without incurring failure, except for causes adjudged by the Dean to be beyond the student's control.

Requirements for the Degree of Master of Religious Education

The course of study leading to this degree is designed for individuals desiring to engage in various forms of Christian Education.

Candidates for this degree must hold the degree of A.B. (or its equivalent), based upon four years of work beyond secondary education, in a college which is approved by one of the regional accrediting bodies, and with academic and personal records which afford promise of competence in this area of service. The course of study will be especially useful for individuals who have had one or more years of experience in Christian Education and desire further training. Candidates for this degree will be limited in number, and individuals interested are urged to apply for admission well in advance of the opening of the academic year. All work offered for this degree, whether in the regular year or in summer sessions, must be completed within a period of six years from the date of beginning.

PREREQUISITES

The following prerequisite studies must have been taken by the candidate prior to his admission to the Divinity School or must be secured, without credit toward the M.R.E. degree, after being admitted:

General Psychology	3 s.h.
Sociology	3 s.h.
Education	3 s.h.

GENERAL REQUIREMENTS

Sixty semester hours of graduate-professional work are required for graduation. Not more than twelve semester hours of this work may be taken in approved summer sessions, and not more than eighteen semester hours outside of the Divinity School.

No credits are allowed for undergraduate courses. However, in approving plans of study leading to this degree, consideration will be given to earlier work taken in the fields of Biblical studies and Christian Education provided such courses were taken in the Junior and Senior years in accredited four-year colleges. Also where candidates for the degree have been engaged professionally as Directors of Christian Education for not less than twelve months prior to entering the Divinity School the amount of Field Work may, upon recommendation of the Director of the M.R.E. program and the approval of the Dean, be reduced to not less than six hours of Project or Directed Field Work during the period required for completing requirements for the degree.

A student who secures credit for 15 semester hours each semester will be in line for graduation at the end of two academic years. The amount of work allowed in each semester may not exceed that permitted in the B.D. curriculum.

COURSE REQUIREMENTS

(Not to include any courses numbered above 199, except in Biblical Studies.)

Not less than eight semester hours of Divinity School work in Biblical Studies (including both Old and New Testaments) for all M.R.E. candidates, and up to fourteen semester hours of such work for candidates adjudged to be insufficiently prepared in Biblical Studies.

Not less than nine nor more than fifteen semester hours in the field of Christian Education, to be distributed as follows: not less than six nor more than twelve semester hours in courses in the practical aspects of Christian Education, and not less than three in the psychological and philosophical aspects of Christian Education.

Not less than four nor more than seven semester hours, taken in two fields, chosen from the offerings in Christian Theology, Christian Ethics, and American Religious Thought.

Not less than four nor more than seven semester hours, taken in two fields, chosen from the offerings in Church History, Historical Theology, and Philosophy of Religion.

Not less than four nor more than five semester hours, taken in two fields, chosen from the offerings in Missions, Church Administration, and Pastoral Care.

Not less than two nor more than three semester hours, taken in one field, chosen from the offerings in Speech, Public Worship, and Church Music.

Project or Directed Field Work: Not less than six nor more than twelve semester hours.

Free electives in sufficient amount to complete sixty hours for graduation will be taken, if necessary.

Senior Seminars: The Senior Seminars of the B.D. curriculum are open to M.R.E. candidates only in the second year, by special permission of the Dean.

Conduct and Ministerial Acceptability

All students are admitted subject to the rules of the University and of the Divinity School, and continuance in the School is conditioned upon the observance of such rules.

The University expects of its students loyal and hearty cooperation in maintaining high standards of conduct as well as of scholarship. The University, therefore, reserves the right, and matriculation by the student is a concession of this right, to compel the withdrawal of any student whose conduct at any time is not satisfactory to the University, even though no specific charge is made against the student.

Divinity School students whose progress and development show that they are not suited to the work of the ministry will not be permitted to continue in the School.

Courses of Instruction*



REQUIRED courses, Limited-Electives, and Senior Seminars are numbered from 11 to 99. Elective courses carrying credit in the Divinity School only are numbered from 101 to 199. Courses approved for credit in both the Divinity School and the Graduate School of Arts and Sciences are numbered above 200. Lists of courses to be offered in any semester will be available at the time of each registration.

I. Biblical Studies

OLD TESTAMENT

11. INTRODUCTION TO THE OLD TESTAMENT I.—The origin, literary forms, and contents of the books of the Old Testament in their geographical and historical setting to the Exile. 3 s.h. MR. STINESPRING

12. INTRODUCTION TO THE OLD TESTAMENT II.—The Post-Exilic period with special reference to Psalms, wisdom literature, and the problem of theodicy. 3 s.h. (2 s.h. until Spring Semester of 1955-56) MR. BROWNLEE

101. POST-EXILIC PROPHECY.—A study of the Post-Exilic prophets from Ezekiel to Daniel, with special reference to Messianic prophecy. 3 s.h. MR. BROWNLEE

196. THE BIBLE AND RECENT DISCOVERIES.—A survey of the contribution of the cultural setting of the Bible as an aid to its understanding. Illustrated with archaeological slides. 3 s.h. MR. BROWNLEE

197. CULTURAL HISTORY OF PALESTINE.—A study of significant contributions to civilization made in ancient, medieval, and modern Palestine with special reference to the three religions, Judaism, Christianity, and Islam. 3 s.h. MR. STINESPRING

201-202. FIRST HEBREW.—The principles and structure of the Hebrew language with translation of selected Old Testament narratives. 6 s.h. MR. STINESPRING

207-208. SECOND HEBREW.—Samuel or Kings the first semester and Isaiah the second. 6 s.h. MR. CHAMBERLAIN

301. THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in Post-Exilic Judaism. Prerequisite: O.T. 11. 3 s.h. MR. BROWNLEE

304. ARAMAIC.—A study of the Aramaic portions of the Old Testament, and selected passages from the Targums, Midrashes, and Talmuds. 3 s.h. MR. STINESPRING

* On recommendation of the Dean, courses offered in the Graduate School of Arts and Sciences other than those approved for credit in the Divinity School may be approved for credit in individual cases, provided no equivalent course is offered in the Divinity School; each case to be decided on its merits.

305. THIRD HEBREW.—A study of late Hebrew prose, with readings from Chronicles, Ecclesiastes, and the Mishnah. 3 s.h. MR. STINESPRING

306. ADVANCED HEBREW.—A course on the Dead Sea Scrolls. 3 s.h. MR. BROWNLEE

307. SYRIAC.—A study of the script and grammar, with readings from the Syriac New Testament and other early Christian documents. Some knowledge of Hebrew and Aramaic prerequisite. 3 s.h. MR. STINESPRING

309. HISTORY OF THE ANCIENT NEAR EAST.—A specialized study of the civilizations of Egypt, Palestine, Syria, and Mesopotamia in the light of Biblical archaeology. 3 s.h. MR. STINESPRING

310. OLD TESTAMENT PROPHECY.—The prophetic movement in Israel with special emphasis on the prophets of the eighth century B.C. Prerequisite: O.T. 11. 3 s.h. MR. STINESPRING

See also Pr. 183.—MATERIALS OF PREACHING—BIBLICAL.

*HISTORY OF ART 215. RELIGIOUS ART OF THE ANCIENT NEAR EAST.—The development of art, particularly architecture and sculpture, as the material expression of religious ideas in Egypt, Mesopotamia, and in part Syria and Palestine to the Persian conquest. 3 s.h. MR. MARKMAN

*HISTORY OF ART 216. RELIGIOUS ART OF THE CLASSICAL WORLD.—The religious art, particularly architecture and sculpture, of Greece and Rome with special emphasis on the monuments in the Near East. 3 s.h. MR. MARKMAN

NEW TESTAMENT

18. EARLY CHRISTIAN LIFE AND LITERATURE.—A basic study of the civilization in which Christianity began; the origin and development of the Christian Church and its literature through the second century. 4 s.h. MR. CLARK
(MR. DAVIES and MR. CHAMBERLAIN in 1954-55)

19. INTRODUCTION TO NEW TESTAMENT THEOLOGY.—A constructive analysis and exposition of the positive doctrinal content of the New Testament. Prerequisite: N.T. 18. 3 s.h. MR. DAVIES

103-104. HELLENISTIC GREEK.—Designed for beginners to enable them to read the Greek New Testament. 6 s.h. MR. EDWARDS

105. LIFE OF PAUL.—A study of Paul's life on the basis of Acts and the letters of Paul, emphasizing the permanent values in Paul's work and his contribution to the world. 3 s.h. MR. MYERS

109. HISTORY OF THE ENGLISH BIBLE.—A general study of the history of the English version with comparison and evaluation of the numerous contemporary translations. This development will be illustrated from the Divinity School Bible collection, with access to and examination of the original editions. 3 s.h. MR. CHAMBERLAIN

116. LIVING ISSUES OF NEW TESTAMENT THEOLOGY.—2 s.h. MR. DAVIES

217. THE NEW TESTAMENT IN GREEK.—Extensive reading of the Greek text of the New Testament, with special emphasis upon its interpretation. Prerequisite: six semester hours' study of the Greek language. 3 s.h. MR. CHAMBERLAIN

218. GALATIANS AND I CORINTHIANS.—A detailed study of two of Paul's major epistles, based on the Greek text. Prerequisite: six semester hours' study of the Greek language. Alternate priority. 3 s.h. MR. DAVIES

220. I PETER AND THE GOSPEL OF JOHN.—A detailed study of two of the non-Pauline writings of the New Testament. The course will be based on the Greek text. Prerequisite: six semester hours' study of the Greek language. Alternate priority. 3 s.h. MR. DAVIES

* Course offered in the Graduate School of Arts and Sciences which is credited toward the degree of Bachelor of Divinity.

311. THE LIFE AND TEACHINGS OF JESUS.—A study of the events and sayings of the historical Jesus, in the light of His mission. 3 s.h. MR. CHAMBERLAIN

312. ADVANCED NEW TESTAMENT THEOLOGY.—An examination of the central aspects of New Testament Theology. Prerequisite: N.T. 19. 3 s.h.

MR. DAVIES

313. APOSTOLIC FATHERS.—A study of the Christian development from Clement of Rome to Polycarp (90-155 A.D.), with readings in the Greek text. 3 s.h.

MR. CLARK

314. PATRISTIC THOUGHT.—A study of the development of early Christian doctrine to the period of Irenaeus. Prerequisite: N.T. 19. 3 s.h.

MR. DAVIES

316. HELLENISTIC RELIGIONS.—A study of the Gentile religions in the Roman Empire, at the beginning of the Christian era. Prerequisite: N.T. 18. 3 s.h.

MR. CLARK

317. THE SYNOPTIC GOSPELS.—A detailed study of their characteristics and contents, based upon the Greek text, with attention to their respective sources and to the development of synoptic criticism. Prerequisite: N.T. 18. 3 s.h.

MR. CLARK

318. TEXTUAL CRITICISM OF THE NEW TESTAMENT.—A study of the scientific recovery of the Greek text on which modern versions are based; manuscript discoveries; principles of textual criticism; practice in collating original manuscripts in the Duke collection. 3 s.h.

MR. CLARK

319. JUDAISM AND EARLY CHRISTIANITY.—3 s.h.

MR. DAVIES

See also Pr. 183. MATERIALS OF PREACHING—BIBLICAL.

*GREEK 257.—The social and cultural history of the Hellenistic world from Alexander to Augustus. 3 s.h.

MR. ROGERS

*LATIN 258.—The social and cultural history of the Graeco-Roman world. 3 s.h.

MR. ROGERS

II. Historical Studies

HISTORY OF RELIGION AND MISSIONS

24. PHILOSOPHY OF CHRISTIAN MISSIONS.—A study of theological foundations, guiding principles, and contemporary problems of the World Christian Community. 2 s.h.

MR. LACY

108. COMPARATIVE RELIGION I.—The ideas of God, sin, and salvation in the religions of the world. Prerequisite: H.R. 159. 3 s.h.

MR. FOSTER

110. COMPARATIVE RELIGION II.—Ideas of the future life and ethical and social ideas in the religions of the world. Prerequisite: H.R. 15. 3 s.h.

MR. FOSTER

126. MISSIONARY EDUCATION IN THE CHURCH.—Practical programs for Church School, audio-visual aids, preaching, stewardship, and special projects. 2 s.h.

MR. LACY

133. HISTORY OF CHRISTIAN MISSIONS.—A survey of the spread of Christianity from the late 18th century to the present day. 2 s.h.

MR. LACY

135. AREA STUDIES IN MISSIONS.—Studies of the cultural setting and current programs and policies of the Church in the following areas: a. Latin America, b. India and Pakistan, c. Africa, d. Southeast Asia, e. Japan-Korea-Philippines, f. Moslem Lands, or g. United States Home Missions. (The area of study to be determined by student interest in consultation with the instructor.) 2 s.h.

MR. LACY

159. (Formerly 15.) LIVING RELIGIONS OF THE WORLD.—A survey of the religious systems of India, China, and Japan, followed by a study of Judaism, Mohammedanism, and Christianity, the object being to trace the historical development of each religion. 3 s.h.

MR. FOSTER

* Course offered in the Graduate School of Arts and Sciences which is credited toward the degree of Bachelor of Divinity.

CHURCH HISTORY

13. HISTORY OF THE CHURCH THROUGH THE PROTESTANT REFORMATION.—A survey through the sixteenth century in terms of spiritual genius, organizational development, great literature, and representative movements. 4 s.h.
Mr. PETRY

14. HISTORY OF THE MODERN CHURCH.—A survey of the main currents in post-reformation and modern church history. 2 s.h.
Mr. SCHAFER

136. PRE-REFORMATION PREACHING.—Sermons, handbooks, and other historical sources studied in relation to Biblical preaching and the liturgical church, the problem of popular ministry and the issues of Christian reform. Prerequisite: C.H. 13. 2 s.h.
Mr. PETRY

137. RELIGIOUS LEADERS IN CHRISTIAN HISTORY.—Representative leaders in the early and medieval church studied in relation to contemporary churchmanship. Prerequisite: C.H. 13. 2 s.h.
Mr. PETRY

138. GREAT BOOKS IN CHRISTIAN HISTORY.—An intensive study of Augustine's *Confessions*, Thomas à Kempis' *Imitation of Christ*, Erasmus's *Complaint of Peace*, Luther's *Christian Liberty*, Calvin's *Instruction in Faith*, and Andrewes' *Private Devotions*. 3 s.h.
Mr. PETRY

139. METHODISM.—A study of Methodist societies in England and the developing church in America as they gave rise to such historic issues as polity, education division, and reunion. Prerequisite: C.H. 13. 2 s.h.
Mr. PETRY

330. THE CHURCH IN EUROPE SINCE 1800.—Emphasis is placed on the relation of the church to the social, economic, and political life of Modern Europe. Particular attention is given to Papal pronouncements on social issues, the relationship of Eastern to Western institutions, and ecclesiastical historiography as it involves source editions, periodicals, and ecumenical literature. 3 s.h.
Mr. PETRY

331. THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian church prior to the Protestant Reformation. Prerequisite: C.H. 13. 3 s.h.
Mr. PETRY

332. THE MEDIEVAL CHURCH.—Outstanding characteristics of the medieval church, emphasizing theory, polity, institutions, sacraments, and worship. Prerequisite: C.H. 13. 3 s.h.
Mr. PETRY

334. CHURCH REFORMERS AND CHRISTIAN UNITY.—The work of such reformers as Marsilius of Padua, William of Ockham, Jean Gerson, Pierre d'Ailly and Nicholas of Cusa in relation to ecclesiastical schism and the search for Christian unity through representative councils. Prerequisite: C.H. 13. 3 s.h.
Mr. PETRY

336. HISTORY OF CHRISTIAN RENUNCIATION IN THE MIDDLE AGES.—A study of the renunciatory ideal and of spiritual practices with special reference to Benedictines, Franciscans, Lowland mystics, and leading seculars. Prerequisite: C.H. 13. 3 s.h.
Mr. PETRY

HISTORICAL THEOLOGY

21. INTRODUCTION TO THE HISTORY OF CHRISTIAN DOCTRINE.—Formative periods of doctrine and controversy illustrating the nature and content of historical theology. 2 s.h.
Mr. SCHAFER

120. THE CREEDS OF CHRISTENDOM.—A historical and interpretative study of great Christian creeds and confessions. Prerequisite: C.T. 20. 3 s.h.
Mr. SCHAFER

129. SEMINAR IN HISTORICAL THEOLOGY.—Selected problems in the history of Christian theology. Prerequisite: H.T. 21. 2 s.h.
Mr. SCHAFER

198. THE HERITAGE OF THE REFORMATION.—The doctrine and practice of the Reformers studied for their contribution to the life and thought of the modern church. 3 s.h.
Mr. SCHAFER

323. HISTORY OF CHRISTIAN THOUGHT I.—A historical study of theology in the ancient and medieval church. Prerequisite: permission of instructor. 3 s.h. MR. SCHAFER

324. HISTORY OF CHRISTIAN THOUGHT II.—A historical study of theology from the Reformation. Prerequisite: permission of instructor. 3 s.h. MR. SCHAFER

AMERICAN RELIGIOUS THOUGHT

28. MOVEMENTS IN AMERICAN RELIGIOUS THOUGHT.—Beginning with the English Reformation, this course introduces the leading types of Protestantism transplanted to or developed within colonial America, primary emphasis being placed upon the dominant modes of Christian thought. 3 s.h. MR. SMITH

199. THE AMERICAN SOCIAL GOSPEL.—A study of Protestant social thought and action in America since 1865. 3 s.h. MR. SMITH

395. RELIGIOUS THOUGHT IN COLONIAL AMERICA.—Consideration of the principal types of Protestant thought in colonial culture. 3 s.h. MR. SMITH

396. AMERICAN RELIGIOUS THOUGHT IN THE NINETEENTH CENTURY.—Comparative exposition of Orthodoxy and Liberalism. 3 s.h. MR. SMITH

397. CURRENT AMERICAN THEOLOGY.—Critical appraisal of conflicting tendencies in American theological thought. 3 s.h. MR. SMITH

398. MODERN AMERICAN CHRISTOLOGY.—An analysis of the historical development of modern American conceptions of the person and work of Christ. 3 s.h. MR. SMITH

495. SEMINAR: JONATHAN EDWARDS AND JOHN WESLEY.—A comparative study of the major theological works of Edwards and Wesley. 2 s.h. MR. SMITH

498. SEMINAR: THEOLOGY OF PAUL TILlich.—An examination of Tillich's philosophical theology. MR. SMITH

III. Theological Studies

PHILOSOPHY OF RELIGION

31. (Formerly 119.) INTRODUCTION TO PHILOSOPHY OF RELIGION. 3 s.h. MR. FOSTER

121. PHILOSOPHY OF CONTEMPORARY THEISM.—A general course: the various forms of contemporary theism will be studied and evaluated. 2 s.h. MR. FOSTER

Additional courses in Philosophy of Religion are being organized.

CHRISTIAN THEOLOGY

20. INTRODUCTION TO CHRISTIAN THEOLOGY.—Contemporary theological tendencies, method and theory of knowledge, and introductory interpretation of the principal tenets of the Christian faith. 4 s.h. MR. CUSHMAN

107. THE PERSON AND WORK OF CHRIST.—An intensive examination of classical types of Christological and soteriological formulation in the history of Christian reflection, assessment and constructive position. Prerequisite: C.T. 20. 2 s.h. MR. CUSHMAN

224. CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory. 3 s.h. MR. CUSHMAN

321. PLATONISM AND CHRISTIANITY.—An analysis of Plato's religious philosophy and a survey of its continuing influence in Hellenistic and Christian thought. Prerequisite: permission of instructor. 3 s.h. MR. CUSHMAN

322. THEOLOGY AND PHILOSOPHY IN THE NINETEENTH CENTURY.^o—Protestant thought from Schleiermacher to Troeltsch together with representative theologians of Britain. 3 s.h. MR. CUSHMAN

325. PHILOSOPHICAL THEOLOGY I.—Main problems in the history of philosophical theology. Prerequisite: Permission of instructor. 3 s.h. MR. CUSHMAN

326. PHILOSOPHICAL THEOLOGY II.—Historical and constructive approach to the problem of faith and reason. Prerequisite: C.T. 325. 3 s.h. MR. CUSHMAN

328. SEMINAR IN TWENTIETH-CENTURY CONTINENTAL AND BRITISH THEOLOGY.—Critical examination of the thought of Barth, Brunner, Berdyaev, Maritain, F. R. Tennant, and William Temple. 3 s.h. MR. CUSHMAN

See also NEW TESTAMENT 312.—ADVANCED NEW TESTAMENT THEOLOGY.

CHRISTIAN ETHICS

27. CHRISTIAN ETHICS I.—The central assumptions and principles of the Christian conception of the good life. 3 s.h. MR. BEACH

114 CHRISTIAN ETHICS II.—A consideration of special problems involved in the application of Christian ethics in modern society. Prerequisite: C.E. 27. 2 s.h. MR. BEACH

190. THE CHRISTIAN CRITIQUE OF COMMUNISM.—Analysis of and alternatives to the dynamic secular ideology from a religious standpoint. 3 s.h. MR. LACY

192. CHRISTIANITY AND INTERNATIONAL RELATIONS.—An application of Christian Ethics to world problems. 3 s.h. MR. LACY

194. INTRODUCTION TO CHRISTIAN SOCIAL ETHICS.—Christian norms for social policy and their application to the domestic, economic, political, and racial patterns of modern culture. 3 s.h. MR. LACY

391. HISTORICAL TYPES OF CHRISTIAN ETHICS I.—A critical study of representative statements of Christian ethical theory, through the early Reformation. Prerequisite: C.E. 27 or its equivalent. 3 s.h. MR. BEACH

392. HISTORICAL TYPES OF CHRISTIAN ETHICS II.—A continuation of C.E. 391, from the Reformation through current Christian ethical theory. Prerequisite: C.E. 391. 3 s.h. MR. BEACH

393. THE CHRISTIAN INTERPRETATION OF HISTORY.—A comparative examination of the chief secular and Christian theories of history current in Western thought. For advanced students. Prerequisite: C.E. 27. 3 s.h. MR. BEACH

394. CHRISTIANITY AND THE STATE.—The relation of the Christian theory of the State to political problems with special consideration of the religious assumptions underlying democratic theory and practice, and of the relationship of church to state. Prerequisite: C.E. 27. 3 s.h. MR. BEACH

IV. Practical Studies

CHURCH ADMINISTRATION

23. CHURCH ADMINISTRATION I.—An introduction to the administrative and supervisory procedure essential in the total work of the church. 2 s.h. MR. WALTON

142. FIELD WORK I—GENERAL.—A course designed to help with personal and parish problems, and the techniques of successful service. 1 s.h. (Note: All students working under or assisted by the Duke Endowment or by Divinity School funds are required to take this course, or 144, Field Work II, or 145, Field Work III.) MR. WALTON

- * 144. **FIELD WORK II—RURAL.**—This course is designed to prepare students for work in rural churches. It emphasizes the training values in field work. 1 s.h.
MR. WALTON
145. **FIELD WORK III—URBAN.**—This course is designed to prepare students for work in urban churches. It is planned to help the student fit into the urban situation and to gain the most from his field work. 1 s.h.
MR. FISHER
146. **CHURCH ADMINISTRATION II.**—This course considers the principles of program planning, policy development, and leadership enlistment and training in the church. 3 s.h.
MR. WALTON
147. **THE URBAN COMMUNITY.**—The urban environment viewed in relation to the people, institutions, organizational structure and constitutive forces giving rise to urbanism as a way of life. 2 s.h.
MR. REGEN
148. **CHURCH FINANCE.**—A seminar to consider the principles of budget making, stewardship instruction, and every member enlistment in church support. 2 s.h.
MR. WALTON
149. **PARISH AND COMMUNITY RESEARCH AND ANALYSIS.**—A seminar to consider the techniques of community surveys, research, and analysis. Attention is given to the use of research data in program planning and in checking on the effectiveness of church work. 2 s.h.
MR. WALTON
150. **THE RURAL PASTOR AND HIS WORK.**—A study of the qualifications of the rural pastor and his task. Attention is given to the supervisory methods and material available for the pastor's use and to the current trends in rural life and their influence upon church work. 3 s.h.
MR. WALTON
151. **THE RURAL CHURCH.**—A study of rural conditions and the place of the church as a community institution and the problems and situations met in local church management and supervision. 3 s.h.
MR. WALTON
152. **PARISH EVANGELISM.**—A study seeking to prepare the student to plan a comprehensive and continuous program of evangelism for the local church. 2 s.h.
MR. FISHER
153. **AUDIO-VISUAL AIDS.**—The principles and methods of audio-visual aids in the program of the church. 2 s.h.
MR. WALTON AND OTHERS
154. **THE URBAN CHURCH.**—A consideration of the function, nature, program, and administration of the effective city church and of the urban minister's distinctive task. 2 s.h.
MR. REGEN
155. **CHURCH POLITY: COMPARATIVE AND DENOMINATIONAL.**—This is a study of the polity of the different denominations in which the students may serve, based upon the disciplines and practices of the respective denominations. 2 s.h.
MR. WALTON, MR. KALE, MR. REGEN AND OTHERS
- (The plan of this course is for the class to meet as a unit one hour a week for the study of the common interests of the denominations; for the other hour the class is divided into groups on the following plan:
- a. **THE POLITY OF THE METHODIST CHURCH.**—The study will be based upon the Methodist Discipline. MR. KALE
 - b. **THE POLITY OF THE BAPTIST CHURCHES.**
 - c. **THE POLITY OF THE CONGREGATIONAL-CHRISTIAN CHURCHES.**
 - d. **THE POLITY OF THE PRESBYTERIAN CHURCHES.** MR. REGEN
- (Courses in the polity of other churches will be arranged as needed.)
157. **GROUP WORK.** The principles and skills required in group work as they apply to discussion groups, forums, panels, guided neighborhood conversation groups, social work, community organization and action. 2 s.h. MR. WALTON AND OTHERS
- FIELD WORK CREDIT.**—Granted on written recommendation of the Director of Field Work upon the completion of satisfactory work in C.A. 23, the completion of Field Work Seminar, 142, 144, or 145, and the performance of successful field work. 1 s.h. (Available only in the senior year.)

CHRISTIAN EDUCATION

22. PHILOSOPHY OF CHRISTIAN EDUCATION.—A basic study of the implications of the theory and of educational theory for a philosophy of Christian education. 3 s.h. MR. RICHEY

25. EDUCATIONAL THEORY AND PRACTICE IN THE CHURCH.—An overall and introductory view of the educational functions of the church. Consideration is given to the work of organization, administration and supervision of the church school. 2 s.h. MR. KALE

125. PSYCHOLOGY AND THEOLOGY.—An inquiry into the relations of psychological and theological interpretations of man. 3 s.h. MR. RICHEY

129. PSYCHOLOGY OF RELIGIOUS DEVELOPMENT.—Psychological foundations of religious nurture of children and youth. 3 s.h. MR. RICHEY

131. (Formerly 22.) PSYCHOLOGY OF RELIGION.—A study of psychological aspects of the religious life. 2 s.h. MR. RICHEY

158. CHRISTIAN EDUCATION AND THE COMMUNITY.—A study of the principles, practices, methods and materials of Christian Education as related to the total community life. 3 s.h. MR. KALE

159. RELIGION IN HIGHER EDUCATION.—An examination of current philosophies of religion in higher education, with reference to student religious work and college teaching of religion. 2 s.h. MR. RICHEY

160. EVANGELISM IN THE CHURCH SCHOOL.—A study of the place of evangelism in the work of the church school. 2 s.h. MR. KALE

161. THEORIES, TYPES AND TECHNIQUES OF TEACHING.—A study of the main principles underlying religious teaching with an examination of the different methods of teaching. 2 s.h. MR. KALE

162. METHODS AND MATERIALS OF CHRISTIAN EDUCATION.—A consideration of the principal administrative problems of the church school, of the various concepts of the curriculum, and an examination of existing curricula, their nature, use and value. 3 s.h. MR. KALE

163. WORSHIP AND DRAMA.—Worship in its bearings upon the educational functions of the Christian religion. The use of drama in Christian Education with the creation of dramatic programs of worship and drama writing and production. 3 s.h. MR. KALE

164. CHRISTIAN EDUCATION OF CHILDREN.—The organization and administration of the work of the church with children of the nursery, kindergarten, primary and junior age groups. 2 s.h. MR. KALE

165. CHRISTIAN EDUCATION OF YOUTH.—The organization and administration of the youth program in the local church. 2 s.h. MR. KALE

166. CHRISTIAN EDUCATION OF ADULTS.—A study of the needs of adults; the materials, methods, and principles of organization for the Christian Education of adults. 2 s.h. MR. KALE

167. HISTORY OF CHRISTIAN EDUCATION IN MODERN TIMES.—A critical study of selected leaders in Christian Education since the Reformation, with special consideration of the American development. 3 s.h. MR. RICHEY

169. THEORIES OF CHRISTIAN EDUCATION. A critical investigation of current theories of Christian Education. 2 s.h. MR. RICHEY
See also HISTORY OF RELIGION 126. MISSIONARY EDUCATION.

PASTORAL CARE

26. INTRODUCTION TO PASTORAL CARE.—A study of the background, needs and methods of pastoral work and personal counseling. 2 s.h. MR. DICKS

170. SEMINAR IN PASTORAL CARE.—For students preparing for full-time pastoral ministry, hospital chaplaincy, industrial chaplaincy, ministry to older people, or work with young people. Practicum. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. class and 1 s.h. clinic. MR. DICKS

171. PASTORAL CARE PRACTICUM I.—A study of pastoral calls and interviews. Particularly for students serving churches or working in clinical situations. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. class and 1 s.h. clinic. MR. DICKS

172. PASTORAL CARE PRACTICUM II.—Advanced pastoral care for students serving churches or working in clinical situations. Prerequisite: P.C. 26 or P.C. 171. 3 s.h. MR. DICKS

173. RELIGION AND HEALTH.—The study of the relation of body and mind and of the religious resources for health through counseling and worship. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. MR. DICKS

174. PERSONAL COUNSELING.—A study of formal personal counseling for those going into the ministry, religious education, and work with college students. 2 s.h. [Open to a limited number of first-year students.] MR. DICKS

175. THE LITERATURE OF PASTORAL CARE.—Directed reading and seminar discussion of writings in the field of psychiatry, psychology, sociology, social work, and ministry, and other fields as they relate to pastoral care. Prerequisite: consent of instructor. 2 s.h. MR. DICKS

176. PASTORAL CARE AND SOCIAL WORK.—Lectures by various specialists and visits to social agencies to orient the minister in relation to other specialists working with individuals and to familiarize him with social service resources. 2 s.h. [Open to a limited number of first-year students.] MR. DICKS

177. ADVANCED SEMINAR IN PASTORAL CARE.—Continuation of 170, which, however, is not a prerequisite. Emphasis upon hospital ministry. Practicum. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. class and 1 s.h. clinic. MR. DICKS AND OTHERS

PREACHING

29-30. SERMON CONSTRUCTION—THEORY AND PRACTICE.—An investigation of the theory of preaching (first semester). Detailed work in practice preaching and a clinical session each week on the application of theory (second semester). 4 s.h. MR. CLELAND AND MR. GARDNER

181. PRACTICAL PROBLEMS IN PREACHING.—Analysis of selected sermons and discussion of problems facing the preacher in the pulpit. Prerequisite: Pr. 29 and 30. 2 s.h. MR. CLELAND

183. MATERIALS OF PREACHING—BIBLICAL.—The problem of authority in the Bible and an evaluation of selected portions of the Bible for present-day preaching. 2 s.h. MR. CLELAND

184. PREACHING VALUES IN THE PAULINE EPISTLES.—A study of the religious experience and theology of St. Paul and its influence on his ethical theory and practice. 3 s.h. MR. CLELAND

185. MATERIALS OF PREACHING—NON-BIBLICAL.—An evaluation of great literature—drama, poetry, biography, fiction—from the point of view of its value for modern preaching. 3 s.h. MR. CLELAND

See also: CHURCH HISTORY 136. PRE-REFORMATION PREACHING.

PUBLIC WORSHIP

178. PUBLIC WORSHIP.—The theory and practice of the worship of the Church: an analysis of the rites and ceremonies in "The Book of Worship." 3 s.h. MR. CLELAND AND MR. RUDIN

180. CHURCH MUSIC.—A study of hymnology, song leading, and problems of the modern church choir. (Offered in both semesters.) 3 s.h. MR. BARNES

SPEECH

17. EFFECTIVE SPEAKING.—Fundamentals of preparation and delivery to develop effectiveness in private and public speech. Individual conferences offered in four sections. (Students electing Vocational Group 1 will, upon recommendation of the instructors in Preaching and Speech, take Speech 132 also.) 2 s.h. MR. RUDIN

132. PUBLIC SPEAKING.—Composition and delivery, based upon individual needs. Selection and arrangement of materials, principles of persuasion, intensive practice in delivery. Individual conferences. 2 s.h. MR. RUDIN

134. ORAL INTERPRETATION OF LITERATURE.—A course for advanced students designed to develop effectiveness in interpreting the Bible and other commonly used materials of public worship. Individual conferences and drill sections to be arranged. Prerequisite: Speech 17. 2 s.h. MR. RUDIN

V. Senior Seminars

In the third year each B.D. candidate will take one Senior Seminar, yielding 2 s.h. credit. No student may enroll in more than one Senior Seminar without special permission of the Dean. Senior Seminars will not yield Graduate School credit, nor be open to special students.

Enrollment in each Senior Seminar shall be normally not more than twelve. No Senior Seminar need be conducted for an enrollment of less than 5 students. Each Senior Seminar will be in charge of a Chairman. Not less than two instructors will participate in each Seminar. General supervision of all Senior Seminars will be exercised by a standing committee of the Faculty.

The work done in each Senior Seminar should be equivalent to that done in a normal 2 s.h. course, with reading based upon a prepared reading list and a substantial paper or written project report.

FIRST SEMESTER

61. THE CHRISTIAN FAITH AND ITS PROCLAMATION.—2 s.h.

MR. CLELAND, MR. CUSHMAN, MR. RUDIN

63. THE ECUMENICAL MOVEMENT IN THE MODERN CHURCH.—2 s.h.

MR. SMITH, MR. LACY, MR. SCHAEFER

65. PRACTICAL VALUES OF BIBLICAL RESEARCH.—2 s.h.

MR. CLARK, MR. STINESPRING

67. THE NEW TESTAMENT AS MATERIALS FOR TEACHING.—2 s.h.

MR. DICKS, MR. DAVIES, MR. KALE, MR. RICHIEY

SECOND SEMESTER

62. WESTERN CHRISTIANITY AND NON-CHRISTIAN FAITHS.—2 s.h.

MR. PEIRY, MR. FOSTER

64. THE OLD TESTAMENT AS MATERIALS FOR TEACHING.—2 s.h.

MR. KALE, MR. BROWNLEE, MR. STINESPRING

66. THE CHRISTIAN CHURCH AND SOCIAL CHANGE.—2 s.h.

MR. BEACH, MR. LACY

68. CHRISTIAN EXPERIENCE AND CONTEMPORARY CHURCH LIFE.—2 s.h.

MR. WALTON, MR. MYERS, MR. RICHIEY

Summer Session, 1954

COURSES OF INSTRUCTION



Courses carrying credit in the Divinity School only are numbered from 101 to 199. Courses approved for credit in both the Divinity School and the Graduate School of Arts and Sciences are numbered above 200. Students entering the Divinity School for the first time in the Summer Session of 1954 will choose courses numbered from 101 to 199.

First Term: June 9-July 17

S107(DS). THE PERSON AND WORK OF CHRIST.—An intensive examination of classical types of Christological and soteriological formulation in the history of Christian reflection, assessment and constructive position. For Divinity School students. 3 s.h.—7:40-9:00, 3.109. MR. CUSHMAN.

S120(DS). THE CREEDS OF CHRISTENDOM.—A historical and interpretative study of great Christian creeds and confessions. For Divinity School students. 3 s.h.—1:40-3:00, 3.109. MR. SCHAFER.

S192(DS). CHRISTIANITY AND INTERNATIONAL RELATIONS.—An application of Christian Ethics to world problems. For Divinity School students. 3 s.h.—9:20-10:40, 3.109. MR. LACY.

S224(DS). CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory concerning man with a view to critical evaluation and construction. For Divinity School students and Graduate students. 3 s.h.—11:00-12:20, 3.109. MR. CUSHMAN.

Second Term: July 20-August 27

S138(DS). GREAT BOOKS IN CHRISTIAN HISTORY.—An intensive study of Augustine's *Confessions*, Thomas a Kempis' *Imitation of Christ*, Erasmus' *Complaint of Peace*, Luther's *Christian Liberty*, Calvin's *Instruction in Faith*, and Andrewes' *Private Devotions*. For Divinity School students. 3 s.h.—7:40-9:00, 3.109. MR. PETRY.

S169(DS). THEORIES OF RELIGIOUS EDUCATION.—A critical investigation of current theories of Religious Education. For Divinity School students. 3 s.h.—1:40-3:00, 3.109. MR. KALE.

S301(DS). THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in post-Exilic Judaism. For Divinity School students and Graduate students. 3 s.h.—9:20-10:40, 3.109. MR. BROWNEE.

S331(DS). THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian church prior to the Protestant Reformation. For Divinity School students and Graduate students. 3 s.h.—11:00-12:20, 3.109. MR. PETRY.

Cost, Residential Arrangement, and Student Aid



Fees and Cost

THE University tuition charge is \$175 per semester. Scholarships covering this amount are granted to all Divinity School students. Other charges are as follows:

Fees per semester:

General Fee	\$ 50.00
Approximate cost of meals per semester.....	175.00
Room per semester (double room).....	62.50
Total per semester.....	<u>\$287.50</u>

The "General Fee" is in lieu of all special charges, and includes the following fees: Matriculation, Medical, Library, Damage, Commencement, and Diploma. Divinity School students may secure admission to all regularly scheduled University athletic contests held on the University grounds during the entire academic year by payment of the athletic fee of \$10.00 per year plus any Federal taxes that may be imposed. This fee is payable in the fall semester.

Due to rising costs, a readjustment in charges, including room rents, is being considered. In the event of an adjustment, applicants will be notified.

LATE REGISTRATION

Students matriculating in either semester at a date later than that prescribed in the catalogue shall pay to the Treasurer of the University a penalty of \$5.00.

Living Accommodations

Women graduate students occupy Epworth Hall, on the Woman's College Campus, which provides facilities for fifty-seven women. There is no dining room in Epworth Hall, but meals may be had in the cafeterias of the Unions. Rooms in Epworth Hall rent for one hundred fifty dollars (\$150.00) each semester for a room for two persons or seventy-five dollars (\$75.00) each occupant each semester and one hundred dollars (\$100.00) for a single room.

The Men's Graduate Center containing bedroom facilities for four hundred men, complete with lounges, study rooms, recreational rooms, post office and dining hall, is available to men of the graduate and professional schools. Divinity School students are eligible for rooms in this building. The rooms are equipped for two persons and the rental charge is one hundred twenty-five dollars (\$125.00) each semester or sixty-two dollars and fifty cents (\$62.50) each person each semester.

Room reservations are made with the Duke University Housing Bureau only after official acceptance for admission by the University. A \$25.00 room deposit is required from all Resident Hall applicants before reservation of room will be made. The initial deposit is effective for the entire college course for the student whose attendance during regular terms is continuous. The room deposit will be refunded within thirty days after graduation upon the request of the student. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit is refundable provided the Housing Bureau is notified at least 60 days prior to the beginning of the semester for which the room is reserved. A resident student, in order to retain his room for the succeeding academic year, must make application at the office of the Housing Bureau for confirmation of the reservation in accordance with the plan that is published during the academic year.

Rooms are rented for no shorter period than one semester or, in the case of a medical student, one quarter, unless by special arrangement with the Housing Bureau. A period of occupancy other than a semester or quarter and without special arrangement will be charged at a minimum rate of twenty-five dollars (\$25.00) or at a rate of one dollar each day of occupancy.

The exchange of rooms may be arranged at the Housing Bureau within fifteen days after the official opening of the semester or quarter of the school term. Thereafter a charge of two dollars (\$2.00) may be made. Persons exchanging rooms without the approval of the Housing Bureau will be subject to charges for both rooms.

The authorities of the University do not assume responsibility for the persons selected as roommates. Each student is urged to select the roommate when the room is reserved.

Beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are furnished by the University. The student supplies linens, blankets and pillows. Rugs, if desired, are not to exceed fifty (50) square feet in size.

Regulations governing the occupancy of rooms will be supplied directly from the Housing Bureau when room reservations are made. Occupants are expected to abide by these regulations.

The University has no apartments for married students. Students desiring such quarters should plan to arrive in Durham as early as

possible before the opening of each semester in order to make their living arrangements. While the Divinity School office will assist wherever it can in these matters, it cannot assume responsibility for making such arrangements.

DINING HALLS

Food service on both the Woman's College Campus and the West Campus is cafeteria style. The cost of meals approximates \$1.75 to \$2.25 per day depending upon the need and taste of the individual. The dining facilities on the West Campus include three cafeterias with multiple choice menus and, in addition, the Oak Room, where full meals and *a la carte* items are served. The Men's Graduate Center has a cafeteria open at meal hours, and a coffee lounge which is open until 11:00 P.M. The prices are the same as in the West Campus Union.

Student Aid

Duke University remits its regular tuition charges to all students enrolled in the Divinity School. In recognition of this, students are expected to render occasional services such as the teaching of Church School classes and responding to calls for particular services. Financial aid, over and above this, is available only in the form of grants-in-aid and work scholarships. These funds come from the sources described on pages 40 through 42 of this catalogue. Those appointed to such work agree to give ten weeks' service during the summer months to a church to which they are assigned. In return they receive their board and room for the period of their summer service and amounts varying up to \$600. By special arrangement a student may be assigned to a church for five weeks' work with one-half the stated remuneration. This plan provides an opportunity for earning a large part of the year's expenses, while at the same time assuring the student valuable experience in religious leadership.

In most cases students will be expected to be able to finance themselves for the first semester of work in the Divinity School; those who show that they can carry their school work satisfactorily are then eligible for various forms of financial assistance.

Students who must have additional income over and above their summer's earnings may secure part-time employment during the academic year. They are strongly urged, however, to make their arrangements so that they will not have duties which will prevent their taking the fullest advantage of the educational and cultural opportunities of the Divinity School.

FIELD WORK SUPERVISION

The Department of Field Work is maintained to help students receiving financial aid to secure work opportunities where they may

render service for such aid. Their work will be supervised so that their experiences may be part of their ministerial training. Students are also helped to secure work opportunities for the experience to be gained. All students working under the department have their board, room, laundry, and travel expenses provided by the charge served. Certain courses are required of all students engaged in field work and are designed to prepare them for the work in which they engage. All students assigned to field work must maintain satisfactory grades and attitudes.

All students working under the Duke Endowment or similar aid are required to attend the Christian Convocation unless excused in writing by the Dean on recommendation of the Director of Field Work.

LOAN FUNDS

Divinity School students who have satisfactorily completed one semester's work are eligible to apply for loans from the University Loan Funds. Such applications should be filed on the approved forms in the Office of the Secretary of Duke University within the first two weeks of each semester.

ENDOWED SCHOLARSHIP FUNDS

Certain special scholarship funds have been established, the income of which is available for students wishing to secure training in preparation for the Christian ministry.

These scholarships are all awarded on the basis of service performed in a local church, thus providing experience as well as financial aid for the student.

N. EDWARD EDGERTON FUND

In 1939 Mr. N. Edward Edgerton of Raleigh, North Carolina, an alumnus of Duke University of the Class of 1921, a member of the Board of Trustees of the University and a member of the Committee on the Divinity School, established the N. Edward Edgerton Fund. The award is limited to students who are candidates for the B.D. degree.

P. HUBER HANES SCHOLARSHIP

Mr. P. Huber Hanes of Winston-Salem, North Carolina, an alumnus of Duke University of the Class of 1900 and a member of the Board of Trustees, has established an annual scholarship yielding the sum of \$400.00.

ELBERT RUSSELL SCHOLARSHIP

In 1942 the Alumni Association of the Divinity School established a scholarship fund in honor of Elbert Russell, Dean Emeritus of the Divinity School and for a number of years Professor of Biblical Theology.

W. R. ODELL SCHOLARSHIP

In 1946 the Forest Hills Methodist Church, Concord, North Carolina, established a scholarship fund in memory of W. R. Odell, for many years a member of the Board of Trustees of the University.

MYERS PARK SCHOLARSHIP FUND

The Myers Park Scholarship Fund was established in 1948 by contributions of the members of the congregation of the Myers Park Methodist Church, Charlotte, N. C.; the income to be used for the benefit of the Divinity School.

HERSEY E. SPENCE SCHOLARSHIP

In 1947 the Steele Street Methodist Church of Sanford, North Carolina, established a scholarship fund in honor of Professor Hersey E. Spence, a former pastor of the congregation, the income to be used for scholarship aid to deserving students of the Divinity School.

GEORGE M. IVEY SCHOLARSHIP FUND

This fund was established December 8, 1948, by gift of George M. Ivey, of Charlotte, North Carolina, an alumnus of Duke University of the Class of 1920, the income to be used for scholarship aid for deserving students in the Divinity School.

LAURINBURG CHRISTIAN EDUCATION FUND

This fund was established December 11, 1948, by gift through the Methodist College Advance Fund, the income to be used for scholarship aid for worthy students of the Divinity School.

JESSE M. ORMOND SCHOLARSHIP FUND

In 1948 the North Carolina Conference established a fund in honor of Professor Jesse M. Ormond, who for many years was Director of Field Work in the Duke Divinity School and Professor of Practical Theology.

R. ERNEST ATKINSON LEGACY

In 1952, under the will of the Reverend R. Ernest Atkinson, of Richmond, Virginia, a member of the Trinity College Class of 1917, a sum of money was given to the Divinity School, the income to be used for the benefit of the School.

DUKE ENDOWMENT GRANTS-IN-AID

The Duke Endowment provides aid to North Carolina rural Methodist churches for operation and maintenance. There are available from this source grants-in-aid to provide additional pastoral service. At the present rate of income approximately sixty students can be employed as assistant pastors in this service during the summer. Terms of these grants are given on page 39 of this catalogue.

ANNUAL SCHOLARSHIPS

In addition to the endowed scholarship and funds provided by the Duke Endowment, the Divinity School receives annual scholarship funds from the following organizations and individuals: The Virginia Conference Duke Alumni; Myers Park Methodist Church, Charlotte, N. C.; the Dilworth Methodist Church, Charlotte, N. C.; the South Carolina Conference of the Methodist Church; the First Methodist Church of Kingsport, Tenn.; Centenary Methodist Church, Winston-Salem, N. C.; Madison Street Church, Clarksville, Tenn., the First Methodist Church, Ocala, Fla.

These scholarships are awarded on the same basis as the endowed scholarships.

THE METHODIST CHURCH

The Methodist Church makes a substantial contribution to the Divinity School by designating a certain percentage of its World Service offerings to the School.

The North Carolina and the Western North Carolina Conferences, direct a certain percentage of the College Sustaining Fund to the Divinity School.

THE METHODIST COLLEGE ADVANCE

The Divinity School was a participant in the North Carolina Methodist College Advance with askings of \$200,000.00 for scholarship aid and extension of the School's service to ministers. Many local churches and individuals have shared in the raising of this significant sum. Specific contributions are the Henry Harrison Jordan Loan Library, the James A. Gray Fund, the J. M. Ormond Fund, the Laurinburg Christian Education Fund, and the Hersey E. Spence Fund.

THE JAMES A. GRAY FUND

In 1947 Mr. James A. Gray of Winston-Salem, North Carolina, presented the fund which bears his name to the Divinity School for use in expanding and maintaining its educational services in behalf of North Carolina churches and pastors. From this fund three scholarships are awarded, two in city church work, and one in rural church work. The Divinity School Seminars and a number of scholarships in the School for Approved Supply Pastors are also supported by income from this gift as well as the James A. Gray Lectures.

FRANK S. HICKMAN PREACHING PRIZE

The Frank S. Hickman prize in preaching, amounting to \$90.00 in cash for the best sermons preached in an annual contest, was established in 1950.

Enrollment 1953-54



Fall and Spring Semesters

- Aitken, Louis Allon (B.A., Buena Vista College), Aurelia, Iowa
Aitken, Paul Wesley (A.B., Morris Harvey College), South Charleston, W. Va.
Allred, Charles Fred (A.B., Elon College), Summerfield, N. C.
Armstrong, James M., Jr. (A.B., Wofford College), Belmont, N. C.
Avant, William Earl (A.B., Duke University), Georgetown, S. C.
- Barden, Lawrence Edgerton (A.B., Duke University), Boone, N. C.
Barnes, John Hyce (A.B., Duke University), Lumberton, N. C.
Barrett, Claude L. (A.B., High Point College), Kinston, N. C.
Bass, Walton Needham (A.B., Wofford College), Goldsboro, N. C.
Beasley, Joseph Hodgkin (B.A., University of North Carolina), Randleman, N. C.
Beaty, James L. (B.S., Tennessee Polytechnic Institute), Jamestown, Tenn.
Beers, Birt Adriance (B.A., Ohio Wesleyan University), Lansing, Mich.
Bedsworth, Ellis J. (B.S., East Carolina College), Marshallberg, N. C.
Bennett, Erman Fay (B.S., College of the Ozarks), Clarksville, Ark.
Bigham, William Ormand (A.B., High Point College), Greensboro, N. C.
Bird, John S. (B.S., Concord College), Athens, W. Va.
Bishop, William Warren (A.B., Duke University), Durham, N. C.
Black, David Coley (A.B., Duke University), Durham, N. C.
Blakeman, Charles Coakley (A.B., Georgetown College; M.A., Louisiana State University), Middlesboro, Ky.
Blue, John Robert (B.S., University of Missouri), Poplar Bluff, Mo.
Bortner, Ernest Edward, Jr. (B.E., The Johns Hopkins University), Baltimore, Md.
Branstetter, Edwin Elvin (A.B., Morris Harvey College; Asbury Theological School, 1951-52), Sharon, W. Va.
Bridges, Lawrence James (B.A., Wake Forest College), Shallotte, N. C.
Brodie, Robert Stewart (B.A., University of Florida), Inez, N. C.
Broome, Sally Ann (B.A., Randolph-Macon Woman's College), Dry Fork, Va.
Browning, Paul C. (A.B., Morris Harvey College), Charleston, W. Va.
Burnett, Marshall Emmett, Jr. (B.S., Millsaps College), Jackson, Miss.
Butler, William Warren (A.B., Duke University), Atlanta, Ga.
- Campbell, Alfred Mayberry (B.A., Randolph-Macon College; The Divinity School, Yale University, 1949-50), Penhook, Va.
Carey, John Jesse (A.B., Duke University), Fort Wayne, Ind.
Carroll, Jackson Walker, Jr. (A.B., Wofford College), Chester, S. C.
Caudill, Charles Clayton (A.B., High Point College), Clayton, N. C.
Caudill, Clarence Jack (A.B., University of Tennessee), Millers Creek, N. C.
Christopher, Richard Lawrence (B.A., Evansville College), Huntingburg, Ind.
Christy, John Holmes, Jr. (A.B., Duke University), Andrews, N. C.
Clarke, Wilfong W., Jr. (A.B., Wofford College), Seven Springs, N. C.
Clayton, Thomas Grinnalds (B.A., Randolph-Macon College), Parksley, Va.
Coffey, John Haines (B.A., Baldwin-Wallace College), Arlington, Va.
Cogdell, James Black (B.A., Huntingdon College), Montgomery, Ala.
Cooke, Reginald James (A.B., High Point College), Maiden, N. C.
Coward, David Morrill (A.B., Emory University), Elberton, Ga.
Crawford, Van Talmadge (A.B., University of Miami), Murreesboro, N. C.
Croft, Martha Gertrude (B.A., Radford College), Alexandria, Va.
Crowder, Richard Joseph (A.B., Duke University), High Point, N. C.
Crum, John Hammond (A.B., Emory University), Raleigh, N. C.
Currin, Beverly Madison, Jr. (A.B., Elon College), Burlington, N. C.
- Dalton, Clarence P. (A.B., A.M., West Virginia University), Worth, W. Va.
Dodson, Samuel Gordon, Jr. (A.B., Elon College), Efland, N. C.
Erwin, Joe Lane (A.B., High Point College), Stokesdale, N. C.
Eskridge, James Brink (B.S., Millsaps College), Tupelo, Miss.
Estus, Charles Wilson (A.B., Drury College), Durham, N. C.
- Fagan, Carol Jean Brill (B.A., Illinois Wesleyan University), Milwaukee, Wis.
Fagan, Donald Earl (B.A., Southern Methodist University), Houston, Texas
Faw, John Francis (A.B., Duke University), Greensboro, N. C.
Fisher, Albert Fleet (A.B., Duke University), Fairmont, N. C.
Fisher, Allyn Johnston (A.B., Wesleyan University), Portland, Conn.

Fitzgerald, F. Owen (A.B., High Point College), Kinston, N. C.
 Fleming, Ralph Lang, Jr. (A.B., Duke University), Greenville, N. C.
 Fritz, M. Jolee (B.A., State University of Iowa), Allentown, Pa.
 Futch, Ladell J. (B.S., Louisiana Polytechnic Institute), Farmville, La.

Gibbs, Philip Hamilton (A.B., Wofford College), Cedar Falls, N. C.
 Glover, Robert Keith (A.B., Duke University), Bailey, N. C.
 Goodrum, William Drayton (A.B., Davidson College), Cornelius, N. C.
 Goodwin, Ernest Ray (B.S., Birmingham-Southern College), Chalkville, Ala.
 Goodwin, James William (A.B., Birmingham-Southern College), Chalkville, Ala.
 Greenwood, Lawrence Henry, Jr. (A.B., Morris Harvey College), Charleston, W. Va.
 Grill, Charles Franklin, Jr. (A.B., Asbury College), Baltimore, Md.
 Grose, James Chalmus, Jr. (A.B., High Point College), Charlotte, N. C.

Hackney, Edwin Atwater (A.B., Duke University), Charlotte, N. C.
 Haire, Billie Allen (A.B., Wofford College), Spindale, N. C.
 Haire, Earle Ross (A.B., Emory University), West Jefferson, N. C.
 Hall, William Pollard, Jr. (B.A., University of Virginia), Newport News, Va.
 Hamilton, James Winfred (A.B., High Point College), Troy, N. C.
 Hansen, Ernest Paul (B.A., Morningside College), Jasper, Minn.
 Harper, Charlie Fred (B.A., Athens College), Cumberland Furnace, Tenn.
 Hawkins, William Thornton (A.B., Guilford College), Canton, N. C.
 Heath, Edward Madison (B.S., Catawba College), Kernersville, N. C.
 Heath, Henry Lewis, Jr. (B.S., University of Alabama), Birmingham, Ala.
 Heston, Warner Roberts, Jr. (B.S., Drexel Institute of Technology), Drexel Hill, Pa.
 Hiatt, Emmett Ernest, Jr. (A.B., High Point College), High Point, N. C.
 Hoagland, Richard Havis (B.S., Washington & Jefferson College), Wilmington, N. C.
 Hoffmann, Theodore Schott (A.B., Duke University), Dunbar, W. Va.
 Houk, J. Edwin (A.B., Duke University), Sanford, Fla.
 Houston, Paul Doran (A.B., Marshall College), Huntington, W. Va.
 Howard, Kenneth Weldon (B.A., Southern Methodist University), Waurika, Okla.
 Hudgins, Walter Edward (A.B., Duke University), Danville, Va.

Ingram, George Stephen (A.B., Duke University), Jacksonville, Fla.

James, Robert Earl (A.B., Wofford College), Florence, S. C.
 Jeffries, William Mac (B.S., University of Virginia), Washington, D. C.
 Jernigan, Julius Oscar (A.B., Atlantic Christian College), Spring Hope, N. C.
 Johnson, Charles Earl, Jr. (B.A., University of North Carolina), Raleigh, N. C.
 Johnson, Kenneth Marshall (B.S., Davidson College), Charlotte, N. C.

Kamps, John Herbert (B.A., Michigan State College), Zeeland, Mich.
 Kaylor, Ralph Earl (A.B., Duke University), Gastonia, N. C.
 Kellum, Elmer Owen, Jr. (B.S., Davidson College), Atlanta, Ga.
 Kincaid, John J. P. (A.B., High Point College), Brown Summit, N. C.
 King, John Thomas (A.B., Duke University), Gastonia, N. C.
 Kirby, Wallace Hines (B.S., University of North Carolina), Roxboro, N. C.
 Knipmeyer, Arlie Charles (A.B., Duke University), Bellflower, Mo.
 Knotts, Albert Ray (B.S.E., Princeton University), Nottoway, Va.

Lambert, Wilson Sharpe (B.A., Millsaps College), Pelham, N. C.
 Langford, Thomas Anderson (A.B., Davidson College), Charlotte, N. C.
 Lawson, Arvest N. (B.A., Hendrix College), Calico Rock, Ark.
 Lawson, Marvest A. (B.A., Henderson State Teachers College), Calico Rock, Ark.
 Layfield, Pearce H. (D.D.S., Emory University School of Dentistry), La Grange, Ga.
 Lazar, Julian Hampton (A.B., Wofford College), Florence, S. C.
 Lee, Thomas Smith, Jr. (A.B., Alabama Polytechnic Institute), Russellville, Ala.
 Lemaster, Homer Lefew (B.A., Emory & Henry College), Martinsburg, W. Va.
 Little, Gene Houston (A.B., Davidson College), Waxhaw, N. C.
 Lowdermilk, Max Kearns (A.B., Duke University), Asheboro, N. C.
 Luessen, Ezra Assel (B.A., Ohio Wesleyan University), Cincinnati, Ohio
 Lugar, Lawrence Edward (B.A., Lynchburg College), Roanoke, Va.

McIntyre, Lucy Louise (B.A., Macalester College), Minneapolis, Minn.
 McKenzie, George Robert, Jr. (A.B., High Point College), Wilmington, N. C.
 McWhorter, John Lloyd (A.B., Duke University), Waxhaw, N. C.
 Mah, Kyung Il (B.D., Korean Methodist Theological Seminary), Seoul, Korea
 Martin, James Granville (B.A., Southern Methodist University), Fort Worth, Texas
 Masters, Lurley Doyle (B.S., Tennessee Polytechnic Institute), Livingston, Tenn.
 Matheson, James Leonard (A.B., Duke University), Mount Gilead, N. C.
 Medlin, Boyce Conway (B.A., Wake Forest College), Durham, N. C.
 Mewborn, Charles Hall (A.B., Atlantic Christian College), Goldsboro, N. C.
 Moore, Raymond Ledbetter, II (A.B., West Virginia Wesleyan College), Fairmont, W. Va.
 Morton, Theodore Roosevelt, Jr. (A.B., Wofford College), Florence, S. C.
 Mullins, H. Stanley (A.B., Birmingham-Southern College), Chatom, Ala.
 Myers, Joseph Edward (B.S., Florida Southern College), St. Petersburg, Fla.
 Myrick, Cecil Kenneth (B.A., Randolph-Macon College), East Spencer, N. C.

Nelson, Earl Volney (B.A., Baker University), Fort Dodge, Iowa
 Nesbitt, Charles Burns (A.B., Wofford College), Spartanburg, S. C.

Ogle, George Ewing (B.A., Maryville College), Pitcairn, Pa.
 Owens, Charles Edward (B.S., Texas A. & M. College), Brookston, Texas

Parker, David Bryce (A.B., High Point College), Lexington, N. C.
 Parvey, Constance Fern (B.A., University of Minnesota), Minneapolis, Minn.
 Pate, Robert Bruce (A.B., Duke University), La Grange, N. C.
 Pelt, Michael Riley (B.A., Troy State Teachers College), Marianna, Fla.
 Pfister, John William (B.A., Baker University), Kansas City, Mo.
 Plybon, George Frank, Jr. (A.B., Morris Harvey College), Marmet, W. Va.
 Pollock, Henry Morrison (A.B., Asbury College), Kernersville, N. C.
 Porter, George Dewey, Jr. (B.S., Marshall College), Huntington, W. Va.

Ralls, Robert Johnson (A.B., Guilford College), Greensboro, N. C.
 Ranson, Leonard Buckland, Jr. (A.B., Washington & Lee University), Baltimore, Md.
 Reagan, Ernest McDowell, Jr. (B.A., University of North Carolina), Weaverville, N. C.
 Rice, Grady Julius (A.B., Elon College), Sanford, N. C.
 Richardson, Charles Holt (B.A., Southern Methodist University), Lenapah, Okla.
 Richardson, Donald Lee (B.M., John B. Stetson University), Hastings, Fla.
 Rickards, James Perry (A.B., East Carolina College), Washington, N. C.
 Robertson, Richard Norris (A.B., Birmingham-Southern College), Talladega, Ala.
 Roettger, Charles Donald (A.B., Union College), Fort Thomas, Ky.
 Rogers, Edwin William (B.S., University of South Carolina; M.R.E., Emory University),
 Sumter, S. C.
 Rogers, William Fletcher (B.S., The Citadel; B.D., Emory University), Brazil
 Rollins, Donald Edward (A.B., High Point College), Lexington, N. C.
 Romanstine, Elizabeth James (B.A., Winthrop College), Columbia, S. C.

Sain, Daniel Dennis (A.B., Lenoir-Rhyne College), Brevard, N. C.
 Saylor, William Kirk (A.B., West Virginia Wesleyan College), Pittsburgh, Pa.
 Schuler, Thomas Wilburn, Jr. (A.B., Morris Harvey College), Charleston, W. Va.
 Scroggs, Robin Jerome (B.A., B.M., University of North Carolina), Raleigh, N. C.
 Sharp, Billy Byers (B.A., Austin College), Dickens, Texas
 Sharp, Raymond Joseph (A.B., Waynesburg College), Mays Landing, N. J.
 Shelton, Wayne Gowan (A.B., High Point College), Mt. Airy, N. C.
 Sherard, Lewis Ramey (A.B., Wofford College), Abbeville, S. C.
 Sherman, Robert Edgar (B.A., Otterbein College), Cleveland, Ohio
 Sherman, William Welby, Jr. (A.B., Dickinson College), Baltimore, Md.
 Shuler, Frank Eugene (B.A., Otterbein College), Columbus, Ohio
 Smith, Harmon Lee, Jr. (B.A., Millsaps College), Lexington, Miss.
 Smith, Jack Courtney (A.B., Catawba College), Misenheimer, N. C.
 Smith, Walter Christian, Jr. (B.A., American University), Washington, D. C.
 Speight, James Braxton (A.B., Asbury College), Sunbury, N. C.
 Stables, Alfred Gray (B.A., Randolph-Macon College), Port Republic, Va.
 Stamey, Ben Franklin (A.B., Duke University), Lawndale, N. C.
 Stanton, Herbert LeRoy (B.S., University of South Carolina; Candler School of Theology,
 1950-51), Columbia, S. C.
 Stark, Rufus Haywood (A.B., Duke University), Greenville, N. C.
 Starnes, William Brantley (A.B., Duke University), Burlington, N. C.
 Steele, Thomas Fant, Jr. (A.B., Wofford College), Rock Hill, S. C.
 Stockton, Thomas Barber (A.B., Davidson College), Winston-Salem, N. C.
 Stradley, Walter McNutt (A.B., Duke University), War, W. Va.
 Stroud, John Edgar, Jr. (B.A., George Peabody College), Cuba
 Sutton, John Hardy, Jr. (A.B., Duke University), La Grange, N. C.
 Swink, Fletcher Wilson (B.A., Randolph-Macon College), Norfolk, Va.
 Swofford, Thomas Hoyle, Jr. (A.B., Duke University), Durham, N. C.

Thomas, Wilbur Edgar (B.A., University of Richmond), Richmond, Va.
 Thompson, George William (A.B., High Point College), Kernersville, N. C.
 Thompson, Richard David (B.A., LL.B., University of Maryland), Lutherville, Md.
 Tyson, George Hart (A.B., Duke University), Clinton, N. C.
 Tyson, Marvin Dewey (A.B., Atlantic Christian College), Elon College, N. C.

Van Reenen, Albert Cecil, Jr. (A.B., West Virginia University), Bluefield, W. Va.
 Vestal, Max Brown (A.B., Elon College), Asheboro, N. C.

Waits, William Kenyon, Jr. (B.A., Huntington College), Montgomery, Ala.
 Wallace, Robert (A.B., Berea College), Somerset, Ky.
 Walter, William N. (B.A., Lycoming College), Union Springs, N. Y.
 Walton, Charles Reginald (B.A., Roanoke College), Roanoke, Va.
 Wegwart, Wayne Gordon (B.S., E.E., Tri-State College), Huntington, W. Va.
 Welch, Donald James (A.B., Union College), Ashland, Ky.
 Wheeler, Ruth Lane (A.B., Union College), Canmer, Ky.
 White, Thomas Lynnwood (B.A., Randolph-Macon College), Richmond, Va.
 Wier, Frank Edward (B.A., University of Tennessee), Knoxville, Tenn.
 Wiggers, Charles Campbell (B.A., Millsaps College), Indianola, Miss.
 Wilkinson, Raymond Lee (A.B., Wofford College), Belmont, N. C.
 Williams, Thomas McKendree, Jr. (A.B., Wofford College), Charleston, S. C.
 Willis, Mason McLaurin (A.B., Wofford College), Fountain Inn, S. C.
 Wills, Bruce B., Jr. (A.B., Duke University), Erwin, Tenn.
 Wilson, Harold Jackson (A.B., Wofford College), Falls Church, Va.
 Wilson, William Earl, Jr. (B.A., Randolph-Macon College), Norfolk, Va.
 Winecoff, George Hoyle (A.B., Erskine College), Concord, N. C.

- Witherspoon, Loy Hahn (A.B., Duke University), Winston-Salem, N. C.
 Witherspoon, Martha C. (A. B., Lenoir-Rhyne College), Hickory, N. C.
 Witter, Hamilton Clarke (A.B., Allegheny College; M.B.A., Stanford University), Chapel Hill, N. C.
 Yingling, Lewis Carroll, Jr. (A.B., The Johns Hopkins University), Woodlawn, Md.
 Young, Hugh Claude (A.B., Duke University), Charlotte, N. C.
 Young, Joe Bryant (B.S., University of Houston), Houston, Texas
 Zunes, John A. (B.S., Virginia Polytechnic Institute), Norfolk, Va.

Students Enrolled in the Department of Religion of the Graduate School of Arts and Sciences 1953-1954

- Babington, Wallace Kent (A.B., Centenary College; B.D., Duke Divinity School), Loughurst, N. C.
 Benjamin, Walter W. (B.A., Hamline University; B.D., Garrett Biblical Institute), Pipestone, Minn.
 Beyer, Emerson (A.B., University of Louisville; M.A., Oberlin College), Arcadia, Calif.
 Carlton, John W. (B.A., Baylor University; B.D., Duke Divinity School), Corpus Christi, Texas.
 Chamberlain, John Victor (A.B., Florida Southern College, M.A., Duke University), Colwyn, Pa.
 Chandler, John Wesley (B.S., Wake Forest College; B.D., Duke Divinity School), Wake Forest, N. C.
 Cline, Pervy A. (B.A., Wake Forest College; B.D., Southern Baptist Theological Seminary), Gastonia, N. C.
 Daniels, Boyd Lee (A.B., College of Wooster; B.D., McCormick Theological Seminary), Sandusky, Ohio.
 DeSanto, Pasquale (B.S., Temple University; B.D., Louisville Presbyterian Theological Seminary), Newton Square, Pa.
 Dunn, Van Bogard (A.B., Murray State College; B.D., Duke Divinity School), Kirksey, Ky.
 Edwards, George Riley (B.A., Southwestern at Memphis; B.D., Louisville Presbyterian Theological Seminary), Pittsboro, N. C.
 Helmbold, F. Wilbur (B.A., Howard College), Springville, Ala.
 Henry, Stuart Clark (B.A., Davidson College; B.D., Louisville Presbyterian Theological Seminary), Concord, N. C.
 Hickey, Doralyn J. (B.A. Rice Institute; M.A. General Assembly Training School), Houston, Texas.
 Hix, Douglas W. (A.B., Davidson College; B.D., Columbia Theological Seminary), La Grange, Ga.
 Hosea, Addison (A.B., Atlantic Christian College; B.D., University of the South), Clinton, N. C.
 Jones, Barney L. (A.B., Duke University; B.D., Yale Divinity School), Durham, N. C.
 McAllister, James L., Jr. (B.A., University of North Carolina; B.D., Yale Divinity School), Roper, N. C.
 Mallard, William, Jr. (A.B., Randolph-Macon College; B.D., Duke Divinity School), Durham, N. C.
 Pemberton, John (A.B., Princeton University; B.D., Duke Divinity School), Creedmoor, N. C.
 Perkins, James C. (B.A., Princeton University; B.D., Oberlin School of Theology; Th.M., Oberlin School of Theology), San Antonio, Texas.
 Polley, Max Eugene (B.A., Albion College; B.D., Duke Divinity School), Niles, Mich.
 Richey, McMurry S. (A.B. Duke University; B.D., Duke Divinity School), Houston, Texas.
 Score, John N. R. (A.B., Southwestern University; B.D., Garrett Biblical Institute), Dallas, Texas.
 Spann, Edwin (B.A., George Peabody College; B.D., Perkins School of Theology, S.M.U.), Nashville, Tenn.
 Stewart, John William (A.B., University of Georgia; B.D., Brite College of the Bible, T.C.U.), Carrollton, Texas.
 Taylor, Kenneth M. (B.A., Florida Southern College; B.D., Duke Divinity School), Miami, Fla.
 Tribble, Harold W., Jr. (A.B., University of Richmond; B.D., Andover Newton), Amherst, Mass.
 Via, Dan Otto, Jr. (B.S., Davidson College; B.D., Southern Baptist Theological Seminary), Charlottesville, Va.
 Webb, O. Kenneth, Jr. (A.B., The Citadel; B.D., Southern Baptist Theological Seminary), Chapel Hill, N. C.

Summer Session 1953

(WITHOUT DUPLICATION)

Clark, Ellis N. (A.B., Elon College), Burlington, N. C.
 Gross, Dawyer Dincott (B.A., Wake Forest College), Roanoke, Va.
 Highfill, William Lawrence (B.A., Wake Forest College; B.D., Southern Baptist Seminary),
 Winston-Salem, N. C.
 Suggs, Marion Jack (A.B., University of Texas; B.D., Texas Christian University), Glade-
 water, Texas
 Quigley, Horace G. (A.B., Atlantic Christian College), Rocky Mount, N. C.
 Yates, Rodney Thomas (A.B., High Point College), Concord, N. C.

Enrollment Summary

Divinity School students, 209; Graduate School students, 30; Summer Session students
 (without duplication), 6. Total: 245.

INSTITUTIONS REPRESENTED

Duke University, 45; Wofford College, 16; High Point College, 16; Randolph-Macon
 College, 7; Davidson College, 6; Elon College, 6; Morris Harvey College, 6; Millsaps College,
 5; University of North Carolina, 5.

The following 4 each: Atlantic Christian College, Birmingham-Southern College, Emory
 University, Southern Methodist University, Wake Forest College.

The following 3 each: Asbury College, Louisville Presbyterian Theological Seminary,
 Southern Baptist Theological Seminary, Union College.

The following 2 each: Baker University, Catawba College, East Carolina College, Garrett
 Biblical Institute, Guilford College, Huntington College, Johns Hopkins University (The),
 Lenoir-Rhyne College, Marshall College, Ohio Wesleyan College, Otterbein College, Tennessee
 Polytechnic Institute, University of South Carolina, University of Tennessee, University of Vir-
 ginia, University of West Virginia, West Virginia Wesleyan College, Yale Divinity School.

The following 1 each: Allegheny College, Alabama Polytechnic Institute, American Uni-
 versity, Andover Newton Theological School, Athens College, Austin College, Baldwin-Wallace
 College, Berea College, Brite College of the Bible (T.C.U.), Buena Vista College, Citadel
 (The), College of the Ozarks, Columbia Theological Seminary, Concord College, Dickinson
 College, Drexel Institute of Technology, Drury College, Emory & Henry College, Erskine Col-
 lege, Evansville College, Florida Southern College, General Assembly's Training School, George
 Peabody College, Georgetown College, Henderson State Teachers College, Hendrix College,
 Howard College, Illinois Wesleyan University, Korean Methodist Theological Seminary, Lou-
 isiana Polytechnic Institute, Lycoming College, Lynchburg College, McCormick Theological
 Seminary, Macalaster College, Maryville College, Michigan State College, Morningside College,
 Oberlin College, Oberlin School of Theology, Perkins School of Theology, Princeton University,
 Radford College, Randolph-Macon Woman's College, Roanoke College, State University of
 Iowa, Stetson University, Texas A. & M., Texas Christian University, Tri-State College, Troy
 State Teachers College, University of Alabama, University of Florida, University of Houston,
 University of Maryland, University of Miami, University of Minnesota, University of Mis-
 souri, University of Richmond, University of the South, Virginia Polytechnic Institute,
 Washington and Jefferson College, Washington & Lee University, Waynesburg College, Wes-
 leyian University, Winthrop College.

Total number of institutions represented: 101.

DENOMINATIONS REPRESENTED

1953-54
 (Summer Session 1953 Included)

<i>Denomination</i>	<i>Divinity</i>	<i>Graduate</i>	<i>Total</i>
Methodist	192	12	204
Presbyterian	5	7	12
Baptist	3	8	11
Congregational Christian	5	1	6
Disciples of Christ	1	2	3
Evangelical and Reformed	1	1	2
Evangelical United Brethren	2		2
Free Will Baptist	1		1
Lutheran	1		1
Protestant Episcopal	2	1	3
	213	32	245

GEOGRAPHICAL DISTRIBUTION

North Carolina, 102; Virginia, 19; West Virginia, 16; South Carolina, 13; Texas, 12; Alabama, 9; Florida, 6; Kentucky, 6; Maryland, 6; Pennsylvania, 6; Tennessee, 6; Georgia, 5; Mississippi, 4; Minnesota, 4; Ohio, 4; Arkansas, 3; Michigan, 3; Missouri, 3; Indiana, 2; Iowa, 2; Oklahoma, 2; Washington, D. C., 2.

The following 1 each: California, Connecticut, Louisiana, Massachusetts, New Jersey, New York, Wisconsin, Cuba, Brazil, Korea.

STATES: 29

FOREIGN COUNTRIES: 3



BULLETIN
OF
DUKE UNIVERSITY



Catalogue Number

1953-1954

ANNOUNCEMENTS FOR 1954-1955

VOLUME 26

June, 1954

NUMBER 8

Annual Bulletins

For GENERAL BULLETIN of Duke University, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF UNDERGRADUATE INSTRUCTION, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE COLLEGE OF ENGINEERING, apply to *The Secretary*, Duke University, Durham, N. C.

For BULLETIN OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES, apply to *The Dean of the Graduate School*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF FORESTRY, apply to *The Dean of the School of Forestry*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF LAW, apply to *The Dean of the School of Law*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF MEDICINE, apply to *The Dean of the School of Medicine*, Duke University, Durham, N. C.

For BULLETIN OF THE SCHOOL OF NURSING, apply to *The Dean of the School of Nursing*, Duke University, Durham, N. C.

For BULLETIN OF THE DIVINITY SCHOOL, apply to *The Dean of the Divinity School*, Duke University, Durham, N. C.

For BULLETIN OF THE SUMMER SESSION, apply to *The Director of the Summer Session*, Duke University, Durham, N. C.

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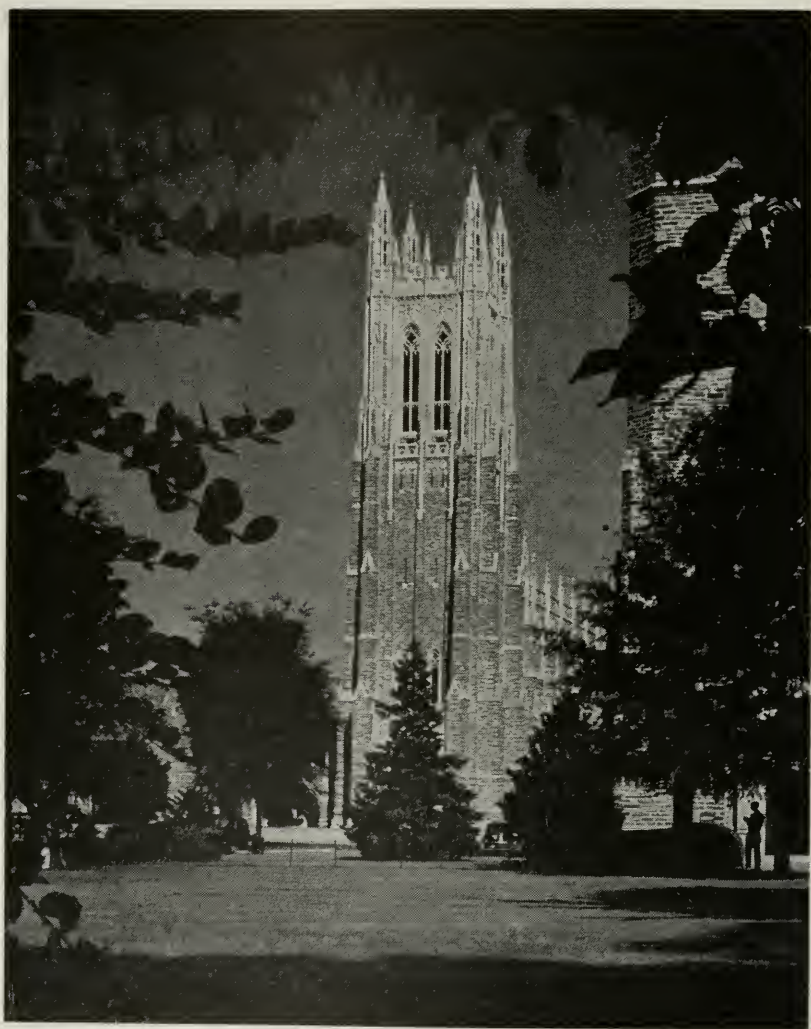
DUKE UNIVERSITY

GENERAL CATALOGUE



ANNOUNCEMENTS FOR 1954-55

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THE CHAPEL

BULLETIN
OF
DUKE UNIVERSITY



CATALOGUE NUMBER

1953-1954

ANNOUNCEMENTS FOR 1954-1955

DURHAM, NORTH CAROLINA
1954

"I request . . . that great care and discrimination be exercised in admitting as students only those whose previous record shows a character, determination, and application evincing a wholesome and real ambition for life."

—JAMES B. DUKE.

Contents

	PAGE
CALENDAR OF THE COLLEGES.....	7
HISTORY	8
GOVERNMENT	9
OFFICERS OF THE UNIVERSITY.....	19
THE UNDERGRADUATE COLLEGES.....	66
THE GRADUATE SCHOOL OF ARTS AND SCIENCES.....	198
THE DIVINITY SCHOOL.....	260
THE SCHOOL OF LAW.....	288
THE SCHOOL OF MEDICINE.....	310
THE SCHOOL OF NURSING.....	342
THE SCHOOL OF FORESTRY.....	374
THE SUMMER SESSION.....	392
ALUMNI ORGANIZATIONS.....	423
GIFTS AND BEQUESTS.....	424
DEGREES AND HONORS.....	426
SUMMARY	438
INDEX	441

1954

JULY

S	M	T	W	T	F	S
				I	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

OCTOBER

					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
I	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

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S	M	T	W	T	F	S
					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

1955

JANUARY

S	M	T	W	T	F	S
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2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL

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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY

					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

OCTOBER

					I	
2	3	4	5	6	7	8
9	10	11	12	13	14	15
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23	24	25	26	27	28	29
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

MAY

					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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					I	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

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3	4	5	6	7	8	9
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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Calendar of the Colleges

1954

- September 16. Thursday, 7:30 P.M. Assembly for all entering freshmen; Freshman Orientation begins.
- September 16. Thursday, 7:30 P.M. Assembly for transfer students entering Trinity College and the College of Engineering.
- September 20. Monday. Registration and matriculation of former students of Trinity College and the College of Engineering, who have not pre-registered.
- September 21. Tuesday. Registration and matriculation of new students with advanced standing, Woman's College.
- September 22. Wednesday. Final registration of pre-registered students.
- September 23. Thursday. Fall semester classes begin.
- October 26. Tuesday. Examination in English Usage.
- November 8. Monday. Last day for reporting mid-semester grades.
- November 24. Wednesday, 5:00 P.M. Thanksgiving recess begins.
- November 29. Monday, 8:00 A.M. Classes are resumed.
- December 11. Saturday. Founders' Day.
- December 18. Saturday, 12:30 P.M. Christmas recess begins.

1955

- January 3. Monday, 8:00 A.M. Classes are resumed.
- January 15. Saturday, 12:30 P.M. Fall semester classes end.
- January 18. Tuesday. Final examinations begin.
- January 28. Friday. Final examinations end.
- January 31. Monday. Registration and matriculation of new students.
- February 1. Tuesday. Last day for matriculation for the spring semester.
- February 2. Wednesday. Spring semester classes begin.
- March 16. Wednesday. Last day for reporting mid-semester grades.
- March 26. Saturday, 12:30 P.M. Spring recess begins.
- April 4. Monday, 8:00 A.M. Classes are resumed.
- May 20. Friday, 5:00 P.M. Spring semester classes end.
- May 23. Monday. Final examinations begin.
- June 2. Thursday. Final examinations end.
- June 4. Saturday. Commencement begins.
- June 5. Sunday. Commencement Sermon.
- June 6. Monday. Graduating Exercises.

History



DUKE UNIVERSITY is built about a group of colleges which have their roots deep in the past. It was founded more than one hundred years ago when a number of earnest citizens from Randolph and adjacent counties assembled in a log school house to organize an educational society. They wished to provide lasting support for the local academy founded a few months before by an energetic son of North Carolina, Brantley York.

Moved by "no small share of philanthropy and patriotism," these men set forth their belief "that ignorance and error are the bane not only of religious but also of civil society" and that they "rear up almost an impregnable wall between man and the happiness he so ardently pants after." On that basis they formally adopted a constitution for the Union Institute Society. Thus in February, 1839, the academy became Union Institute. Twelve years later the Institute was reorganized as Trinity College. In 1892 it was moved from the fields of Randolph County to the growing city of Durham. Thirty-two years later the College grew into Duke University. With increasing enrollment and the development of specialized needs the Woman's College was formed in 1925 and the College of Engineering in 1938.

As the University developed around the core of the colleges, the Graduate School of Arts and Sciences expanded in number of students and in areas of instruction and research; the School of Law of Trinity College became the Duke University School of Law; and other professional schools were established. The Divinity School was organized in 1926, the School of Medicine and the School of Nursing in 1930, and the School of Forestry in 1938.

From academy to university the basic principles have remained constant. The University motto, *Eruditio et Religio*, reflects a fundamental faith in the union of knowledge and religion, the advancement of learning, the defense of scholarship, the love of freedom and truth, a spirit of tolerance, and a rendering of the greatest service to the individual, the state, the nation, and the church. Through changing generations of students the objective has been to encourage each individual to achieve to the extent of his capacities an understanding and appreciation of the world in which he lives, his relationship to it, his opportunities, and his responsibilities.

Government



I. THE INDENTURE OF TRUST BY WHICH THE UNIVERSITY WAS CREATED

Among the provisions of James B. Duke's Indenture of Trust was an educational institution to be known as Duke University, to the building and support of which he made provision at the time of execution of the Indenture and later by additions thereto by the operation of his Will. In respect to Duke University the Indenture contains the following provisions:

I. (In Article FOURTH) The Trustees hereunder are hereby authorized and directed to expend as soon as reasonably may be not exceeding Six Million Dollars of the corpus of this trust in establishing at a location to be selected by them within the State of North Carolina an institution of learning to be known as Duke University, for such purpose to acquire such lands and erect and equip thereon such buildings according to such plans as the Trustees may in their judgment deem necessary and adopt and approve for the purpose to cause to be formed under the laws of such state as the Trustees may select for the purpose a corporation adequately empowered to own and operate such properties under the name of Duke University as an institution of learning according to the true intent hereof, and to convey to such corporation when formed the said lands, buildings and equipment upon such terms and conditions as that such corporation may use the same only for such purposes of such university and upon the same ceasing to be so used then the same shall forthwith revert and belong to the Trustees of this trust as and become a part of the corpus of this trust for all the purposes thereof.

However, should the name of Trinity College, located at Durham, North Carolina, a body politic and incorporate, within three months from the date hereof (or such further time as the Trustees hereof may allow) be changed to Duke University, then, in lieu of the foregoing provisions of this division "FOURTH" of this Indenture, as a memorial to his father, Washington Duke, who spent his life in Durham and whose gifts, together with those of Benjamin N. Duke, the brother of the party of the first part, and of other members of the Duke family, have so largely contributed toward making possible Trinity College at that place, he directs that the Trustees shall expend of the corpus of this trust as soon as reasonably may be a sum not exceeding Six Million Dollars in expanding and extending said University, acquiring and improving such lands, and erecting, removing, remodeling and equipping such buildings, according to such plans, as the Trustees may adopt and approve for such purpose to the end that said Duke University may eventually include Trinity College as its undergraduate department for men, a School of Religious Training, a School for Training Teachers, a school of Chemistry, a Law School, Co-ordinate College for Women, a School of Business Administration, a Graduate School of Arts and Sciences, a Medical School and an Engineering School, as and when funds are available.

II. (In Article FIFTH) Thirty-two per cent of said net amount not retained as aforesaid for addition to the corpus of this trust shall be paid to that Duke University for which expenditures of the corpus of the trust shall have been made by the Trustees under the "Fourth" division of this Indenture so long as its name shall be Duke University and it shall not be operated for private gain, to be utilized by its Board of Trustees in defraying its administration and operating expenses, increasing and improving its facilities and equipment, the erection and enlargement of buildings and the acquisition of additional acreage for it, adding

to its endowment or in such other manner for it as the Board of Trustees of said institution may from time to time deem to be of its best interests, provided that in case such institutions shall incur any expense or liability beyond provisions already in sight to meet same, or in the judgment of the Trustees under this Indenture be not operated in a manner calculated to achieve the results intended hereby the Trustees under this Indenture may withhold the whole or any part of such percentage from said institution so long as such character of expense or liabilities or operation shall continue, such amounts so withheld to be in whole or in part either accumulated and applied to the purposes of such University in any future year or years, or utilized for the other objects of this Indenture, or added to the corpus of this trust for the purpose of increasing the principal of the trust estate, as the Trustees may determine.

III. (In Article SEVENTH) I have selected Duke University as one of the principal objects of this trust because I recognize that education, when conducted along sane and practical, as opposed to dogmatic and theoretical, lines, is, next to religion, the greatest civilizing influence. I request that this institution secure for its officers, trustees, and faculty, men of such outstanding character, ability, and vision as will insure its attaining and maintaining a place of real leadership in the educational world, and that great care and discrimination be exercised in admitting as students only those who previous records shows a character, determination, and application evincing a wholesome and real ambition for life. And I advise that the courses at this institution be arranged, first, with special reference to the training of preachers, teachers, lawyers and physicians, because these are most in the public eye, and by precept and example can do most to uplift mankind, and second, to instruction in chemistry, economics, and history, especially the lives of the great of earth, because I believe that such subjects will most help to develop our resources, increase our wisdom and promote human happiness.

IV. (In Article THIRD) As respects any year or years and any purpose or purposes for which this trust is created (except the payments hereinafter directed to be made to Duke University) the Trustees in their uncontrolled discretion may withhold the whole or any part of said incomes, revenues and profits which would otherwise be distributed under the "Fifth" division hereof, and either (1) accumulate the whole or any part of the amount so withheld for expenditures (which the Trustees are hereby authorized to make thereof) for the same purpose in any future year or years, or (2) add the whole or any part of the amounts so withheld to the corpus or the trust, or (3) pay, apply and distribute the whole or any part of said amounts to and for the benefit of any one or more of the other purposes of this trust, or (4) pay, apply and distribute the whole or any part of said amounts to or for the benefit of any such like charitable, religious or educational purpose within the State of North Carolina or the State of South Carolina, or any such like charitable hospital purpose which shall be selected therefor by Trustees called for the purpose, complete authority and discretion in and for such selection and utilization being hereby given the Trustees in the premises.

2. THE CHARTER OF THE UNIVERSITY

SECTION I. That A. P. Tyer, J. H. Southgate, B. N. Duke, G. A. Oglesby, V. Ballard, J. A. Long, J. F. Bruton, J. N. Cole, F. A. Bishop, J. G. Brown, C. W. Toms, J. W. Alspaugh, W. R. Odell, J. A. Gray, F. Stikeleather, Kope Elias, S. B. Turrentine, P. H. Hanes, T. F. Marr, G. W. Flowers, M. A. Smith, R. H. Parker, W. J. Montgomery, F. M. Simmons, O. W. Carr, R. A. Mayer, N. M. Journey, Dred Peacock, B. B. Nicholson, W. G. Bradsher, E. T. White, T. N. Ivey, J. B. Hurley, R. L. Durham, W. C. Wilson, and their associates and successors shall be, and continue as they have been, a body politic and corporate under the name and style of DUKE UNIVERSITY, and under such name and style shall have perpetual existence and are hereby invested with all the property and rights of property which now belong to the said corporation, and said corporation shall henceforth and perpetually, by the name and style of DUKE UNIVERSITY, hold and use all the authority, privileges, and possessions it had or exercised under any former title and name, and be subject to all recognized legal liabilities and obligations now outstanding against said corporations.

SEC. 2. That such corporation is authorized to receive and hold by gift, devise, purchase or otherwise, property, real and personal, to be held for the use of said University and its dependent schools or for the use of either or both (as may be designated in the conveyance or will).

SEC. 3. That the Trustees shall be thirty-six in number, of whom twelve shall be elected by the North Carolina Conference of the M. E. Church, South; twelve by the W. N. C. Conference of the said church; and twelve by the graduates of said University; *Provided, however*, That no person shall be elected a Trustee till he has first been recommended by a majority of the Trustees present at a regular meeting; and the Trustees shall have power to remove any member of their body who may remove beyond the boundary of the State or who may refuse or neglect to discharge the duties of a Trustee. The term of office of Trustees shall be six years, and they shall be so arranged that four Trustees shall be elected by each Conference and four by the graduates every two years. The Trustees shall regulate by bylaws the manner of election of the Trustees to be chosen by the graduates. Should there exist a vacancy by death, resignation, or otherwise of any Trustee, the same shall be filled for the unexpired term by the Board of Trustees. That the present Trustees shall continue and remain in office during the term for which they have been heretofore respectively elected.

SEC. 4. That the said corporation shall be under the supervision, management and government of a president and such other persons as said Trustees may appoint; the said president, with the advice of other persons so appointed, shall from time to time make all needful rules and regulations for the internal government of said University and prescribe the preliminary examinations and terms and conditions on which pupils shall be received and instructed.

SEC. 5. That said Trustees shall have power to make such rules, regulations, bylaws not inconsistent with the Constitution of the United States and of this State, as may be necessary for the good government of said University and management of the property and funds of the same.

SEC. 6. That the Trustees shall have power to fix the time of holding their annual and other meetings, to elect a president and professors for said University, to appoint an executive committee to consist of seven members, which committee shall control the internal regulations of said University and fix all salaries and emoluments, and to do all other things necessary for an institution of learning not inconsistent with the laws of this State and of the United States.

SEC. 7. That the Faculty and Trustees shall have the power of conferring such degrees and marks of honor as are conferred by colleges and universities generally; and that five Trustees shall be a quorum to transact business.

SEC. 8. That all laws and parts of laws or of the charter heretofore granted which are in conflict with this act are hereby repealed.

SEC. 9. That this act shall be in force from and after its ratification and acceptance by the Board of Trustees.

3. THE BYLAWS OF THE UNIVERSITY

1. AIMS OF THE UNIVERSITY. The aims of Duke University are to assert a faith in the eternal union of knowledge and religion set forth in the teachings and character of Jesus Christ, the son of God; to advance learning in all lines of truth: to defend scholarship against all false notions and ideals; to develop a Christian love of freedom and truth; to promote a sincere spirit of tolerance; to discourage all partisan and sectarian strife; and to render the largest permanent service to the individual, the state, the nation, and the church. Unto these ends shall the affairs of this University always be administered.

2. THE UNIVERSITY TRUSTEES, THEIR MEETINGS AND THEIR OFFICERS. The Alumni Trustees, nominated by the Board as provided for in the Charter, are elected by the Alumni Association. The officers of the Board are chairman, vice-chairman, and recording secretary. They are elected by the Trustees at their annual meeting to serve one year or until their successors are elected and qualify. The chairman calls to order and presides at all meetings of the Board, calls extraordinary meetings when, in his judgment, such meetings may be necessary, and represents

the Trustees at public meetings of the University. He is ex-officio member of the Executive Committee. In the absence of the chairman, the vice-chairman calls to order and presides over meetings of the Board, but does not perform any of the other duties of the chairman unless ordered to do so by the Board or the Executive Committee. The recording secretary records the minutes of all the meetings, does the correspondence, and is the custodian of the records and other documents that may belong to the Board.

3. **THE EXECUTIVE COMMITTEE.** The Executive Committee consists of seven members, three of them from the University Trustees, including the chairman of the Board ex-officio, three from the Endowment Trustees, and the President of the University ex-officio. It performs the duties set out for it in the charter—namely, controls the internal regulations of the University and fixes all salaries and emoluments. It has all the powers of the Board of Trustees in the interims between meetings of the Board of Trustees except the nomination of Trustees and election of members of the Executive Committee; however, appointment of officers of the University by the Executive Committee is subject to the approval of the University Trustees. The Executive Committee is expressly empowered to appoint an Investment Committee and to give to such Committee such powers and duties, as in the judgment of the Executive Committee, may seem fit. The Executive Committee is elected by the University Trustees, three of them on nomination of the Endowment Trustees, and the Committee elects its own officers who are chairman and recording secretary. It meets once a month (unless otherwise determined by the Committee) and oftener when necessary and by its own resolution sets its time and date of meetings except that special meetings are called by its chairman upon three or more days written or telegraphic notice to the members of the Committee. The Committee, through its chairman, once a year makes a report to the annual meeting of the University Trustees.

4. **OFFICERS OF THE UNIVERSITY.** The officers of the University are a president, three vice-presidents, a business manager and comptroller, a treasurer, a bursar, a dean of the University, and such other deans as may be needed, a recording dean or registrar, and a secretary who is also secretary of the faculty. There may also be a chancellor and a vice-chancellor. Whenever it may seem wise, one person may hold more than one office.

PRESIDENT. The President of the University calls, and presides at, all the meetings of the Faculties except as otherwise provided in these bylaws, and sees that the laws and regulations of the Executive Committee and the Trustees affecting the administration and work of the University are carried out. He has direction of the discipline and work of the University and, except as otherwise provided in these bylaws, appoints all committees of the Faculties. Anything in these bylaws to the contrary notwithstanding, the President may veto any action of any faculty or committee or agency thereof. However, in every instance he shall submit to the appropriate faculty, committee or agency in writing his reasons for setting aside their action, and the secretary of such Faculty shall record his reasons in the record book of such Faculty. The President makes an annual report to the Board of the work, conditions, and needs of the University, and of other matters that may be of concern to it or to the cause of higher education. He nominates all members of the Faculties, and represents them at all public meetings of the University. He is an ex-officio member of the Executive Committee and acts, unless the Trustees designate the Chancellor of the University for the purpose, as a medium of communication between the University Trustees and the Endowment Trustees.

CHANCELLOR. There may be a Chancellor of the University. If the Trustees appoint such an officer, he shall be selected for this office because of his long and faithful service to the University. Such an officer, if appointed, is a high officer of the University. He may be designated by the Trustees as the medium of communication between the University Trustees and the Endowment Trustees and when he is so designated the President does not act in such a capacity. He is available, when requested by the President, to render all possible services in an advisory capacity. He has such other duties as may, from time to time, be delegated to him by the Trustees.

VICE-CHANCELLOR. There may be a Vice-Chancellor of the University. If the Trustees appoint such an officer he shall be selected because of his long and faithful service to the University. When requested by the Chancellor, he performs the duties designated to the Chancellor by the Trustees. He is available, when requested by the Chancellor or President, to render all possible services in an advisory capacity. He also has such other duties as, from time to time, may be delegated to him by the Trustees.

VICE-PRESIDENTS. The three Vice-Presidents of the University have supervision of the work of the University in the divisions of (a) education, (b) public relations, and (c) student life. In the absence of the President, Vice-Presidents, in the above order, may perform such duties of the President as may demand immediate attention.

BUSINESS MANAGER AND COMPTROLLER. The Business Manager, who is also Comptroller, has the custody of all property of the University. He is responsible to an administrative committee and through such committee to the Trustees either directly or through the Executive Committee for all matters pertaining to the business affairs of the University except the investment of funds and is required to make monthly reports through such administrative committee to the Executive Committee and annual reports through the administrative committee to the Trustees concerning his accounts and the property in his charge. Such administrative committee is composed of not less than three nor more than five persons, three of whom are the President of the University, as chairman, the Business Manager and Comptroller, and a Vice-President selected from time to time by the Trustees or the Executive Committee. The Executive Committee has power to determine the number, if any, of additional members, up to the limit set, to be added to or removed from membership in the committee and in their judgment to make selection of the persons to be so added or so removed. The Business Manager and Comptroller annually prepares or causes to be prepared a Budget of expected Receipts and Disbursements and submits same to the Executive Committee for their approval. Upon such approval, he is primarily responsible for the operation of the Budget. He nominates to the Executive Committee any and all assistants required by him to do well the duties of his office. The Business Manager and Comptroller shall be required to give bond in such amount as may be designated by the Trustees or the Executive Committee for the faithful performance of his duties.

TREASURER. The Treasurer has primary responsibility for the care and custody of all securities and for the financial records of the University. He makes an annual report of his accounts to the Trustees and such reports, as from time to time, may be required of him by the Executive Committee. He also makes to the Business Manager and Comptroller monthly reports and oftener when required. He nominates to the Executive Committee any and all assistants required by him to do well the duties of his office including the nomination of a Bursar and Assistant Treasurer or Treasurers which officers and assistants shall primarily be responsible to him. The Treasurer and his assistants shall be required to give bond in such amount as may be designated by the Trustees or the Executive Committee for the faithful performance of their duties.

BURSAR. The Bursar has primary responsibility for all collections and disbursements. He is nominated by and responsible to the Treasurer to whom he makes such reports as the Treasurer from time to time requires of him. The Bursar shall be required to give bond in such amount as may be designated by the Trustees or the Executive Committee for the faithful performance of his duties.

SECRETARY. The Secretary of the University has custody of the corporate seal of the University and affixes and attests same when circumstances require and the Trustees or the Executive Committee so direct. He is also secretary of the Faculty, attends its meetings and makes permanent records of actions and transactions at such meetings. He has such other duties and responsibilities as his title suggests and may, from time to time, be delegated to him by the appropriate authorities.

5. **FACULTIES.** The University Faculty is composed of:

- (a) The President and the Secretary of the University and such officers designated by the President as primarily responsible for instruction and research; and
- (b) All persons of the rank of full instructor and above who are engaged in work for which recognized University degrees are awarded, and also members of the faculty emeriti.

The University Faculty in cooperation with the President and officers of the University, is responsible for the conduct of instruction and research in the various schools and colleges of the University.

In furtherance thereof this faculty:

- (a) Enacts such regulations as it deems necessary to carry on instruction and research, promote faculty and student welfare, advance the standard of work and otherwise develop the scholarly aims of the University;
- (b) Recommends to the University Trustees:
 - (1) Such persons as it deems fit to receive degrees or other marks of distinction; and
 - (2) The establishment of any new degree or diploma;
- (c) Consults with and advises the President on matters of general University policy within its competence, in order to assist him in carrying out his duties as the chief administrative officer of the University and as the means of communication between the Trustees and the administrative officers and Faculty;
- (d) Receives such information on the affairs of the University as is necessary for the exercise of its functions;
- (e) Subject to the reserved power of control by the Trustees and the President, determines policies to which the faculties of all schools and colleges and all committees and councils thereof are expected to conform;
- (f) In extraordinary circumstances, when normal channels of communication are not available, may by formal action request a conference between its representatives and representatives of the Board of Trustees or of the Executive Committee of the University. Under normal conditions the President of the University is the liaison between the University Faculty and the governing boards of the University or the committees thereof;
- (g) Has as its Chairman the President of the University and as its Secretary the Secretary of the University;
- (h) Meets regularly in October and February and before the June commencement; meets at other times on the call of the President or of the Vice-President in the Division of Education, or on the written request of twenty members. At the first meeting of each year the Faculty receives from the President a report on the state of the University;
- (i) May exercise its functions through such committees as it may choose to set up. The University Council is a standing committee of the Faculty, subject to its regulations under these bylaws.

The University Council consists of fifteen members as follows: The President of the University; the Vice-President in the Division of Education; three persons, who need not be members of the University Faculty, appointed annually by the President; and ten members elected from and by the University Faculty. The Faculty members are selected from the schools and colleges as follows: from the School of Medicine and the School of Nursing, one member; from the Divinity School, the School of Forestry, and the School of Law, one member; from the College of Engineering, Trinity College and the Woman's College, and the Graduate School of Arts and Sciences, three members; and from the University Faculty at large, five members. The members are elected by such methods and for such terms as the University Faculty may by regulation prescribe.

The Council has three officers: A Chairman who normally presides; a Vice-Chairman who presides in the absence of, or at the request of, the Chairman; and a Secretary. The President of the University is ex-officio Chairman of the Council. The Council elects annually by ballot the Vice-Chairman and Secretary from the Faculty members of the Council. The three officers constitute an agenda

committee and appoint members of committees set up by the Council in cases where membership is not otherwise prescribed by Council action. Faculty members and officers of the University who are not Council members may serve on Council Committees. The Council meets at such times as it elects. Special meetings are called by the Chairman, by the Vice-Chairman, or, at the request of three of its members, by the Secretary. A majority of the members shall constitute a quorum.

The University Council serves as an advisory body on matters of general University policy and interest.

Through the University Council the President endeavors to keep the University Faculty informed upon major matters of University policy, and expects the Council to bring to his attention any matters affecting the general interests and policies of the University.

In the exercise of its advisory function the Council, at the request of the President, a faculty or department, or any individual of the faculties or administration, or on its own initiative, may:

- (i) Consider any subject within its competence and report recommendations thereon to the President or to the University Faculty;
- (ii) Study and report to the President or to the University Faculty on matters within its competence relating to any division of the University subject to the jurisdiction of the President or University Faculty, whenever the Council, by a three-fourths vote, decides that such study is in the best interests of the University.

The Council makes periodic reports in writing to the University Faculty on its activities.

The Undergraduate Faculty Council is composed of: The President of the University; the Vice-Presidents in the Divisions of Education and Student Life; the Secretary of the University; the Dean of Undergraduate Studies; the Deans, Associate Deans, and Assistant Deans of Trinity College, the Woman's College and the College of Engineering; the University Librarian; the Director of the Summer Session; the Directors of Admissions; the Director of the Bureau of Testing and Guidance; and the Chairman and Director of Undergraduate Studies of each department in the above colleges. Any department which has more than five full-time teaching staff members shall elect one additional member to the Council; any department which has more than ten such staff members shall elect a total of two additional members to the Council. The President in his discretion may appoint not more than five additional voting members.

The Vice-President in the Division of Education, or his deputy, serves as Chairman of the Council. The Council may provide for such standing or special committees, including an executive committee, as it deems necessary. Membership on committees of the Council is not restricted to Council members. The Council normally meets once each month during the academic year. Special meetings are called by the Chairman and on the written request of five members of the Council.

The functions of the Council, subject to the regulations of the University Faculty, are:

- (a) To consider the broad objectives of undergraduate education;
- (b) To encourage the achievement and maintenance of high standards of teaching and scholarship in the undergraduate colleges;
- (c) To legislate on questions of curriculum for the undergraduate colleges of arts and sciences;
- (d) To adopt regulations concerning matters affecting the academic life of students in the undergraduate colleges, and to integrate the details of educational and related interests of those colleges.

In the exercise of its functions, the Council receives information on such matters as student aid, admissions and student life.

The Graduate School Faculty is composed of the President of the University; the Vice-President in the Division of Education; the Dean of the Graduate School; officers of the Graduate School; the Director of the Summer Session; the University

Librarian; and all full-time faculty members of the rank of assistant professor and above who are approved to offer graduate work or to supervise the research work of graduate students registered in the Graduate School.

The Dean of the Graduate School, or his deputy, serves as Chairman of the Graduate School Faculty. A Secretary is appointed by the President.

There is an Executive Committee consisting of the Dean of the Graduate School and members elected by and from the Graduate School in accordance with regulations prescribed by the Graduate School Faculty. This Committee serves in an advisory and consultative capacity and discharges specific duties delegated to it by the Graduate School Faculty.

The Graduate School Faculty meets twice each semester. Additional meetings may be called by the Chairman or on the written request of five members. The Executive Committee normally meets once each month but not less than six times during each academic year.

The functions of the Graduate School Faculty, subject to the regulations of the University Faculty, are:

- (a) To establish the standards of graduate work and the requirements for degrees in the Graduate School of Arts and Sciences;
- (b) To study and enact the necessary regulations governing courses of graduate instruction and graduate research;
- (c) To determine policies to be followed in dealing with other educational matters arising in the Graduate School of Arts and Sciences.

The Engineering Faculty Council consists of the President of the University; the Vice-President in the Division of Education; the Dean of the College of Engineering; the Dean of Undergraduate Studies; the Secretary of the Council; the Chairman and one additional representative from each department of Engineering; and three members from the University Faculty representing departments in which engineering students are required to take work. The Secretary and the three Faculty members from outside the College of Engineering are appointed annually by the President.

The Dean of the College of Engineering serves as Chairman of the Council. The Council normally meets once each month; additional meetings are called by the Chairman or on the written request of five Council members.

The Council considers and, subject to regulations of the University Faculty, legislates on questions of curricula and adopts regulations concerning those educational, professional, and administrative matters pertaining exclusively to the College of Engineering.

Each of the professional Schools of the University has its own faculty.

The President of the University, the Vice-President in the Division of Education, and all members of the University Faculty in each professional school are members of the faculty of that school.

The Dean of each professional school, or his deputy, serves as chairman of the Faculty of that school. Each faculty arranges details of its organization to fit its particular needs, observing the general principles of representation, freedom of discussion and democratic procedures.

The functions of each professional school faculty, subject to the regulations of the University Faculty, are to legislate on its curriculum and programs of work and to adopt regulations on the educational and administrative activities of that school.

6. **ACADEMIC YEAR.** The academic year begins on the morning of the Wednesday following September 15. The annual Commencement comes in the week including the first Sunday in June. The Christmas recess begins at 1:00 P.M. December 20 (or December 19 if December 20 falls on Sunday), and ends at 8:00 A.M., January 3 (or January 4 if January 3 falls on Sunday). The spring recess begins at 1:00 P.M. of the Saturday in March nearest to March 25, and ends at 8:00 A.M., of Monday nine days later. Thanksgiving Day is a holiday.

7. **TENURE OF OFFICE.** Teachers of all ranks are subject to removal by the

Executive Committee, with the approval of the University Trustees, for misconduct or neglect of duty. Teachers may be elected for terms of one, two, three, or four years; or teachers with the rank of professor may be elected without time-limit. Administrative officers are usually elected without time-limit, but the Executive Committee, with the approval of the University Trustees, may remove any officer of the University, whenever, in their opinion, he is not properly performing the duties of his office.

8. The bylaws may be amended at any regular meeting of the University Trustees by the affirmative vote of two thirds of the then membership of the Board, providing that the proposed amendment is submitted through the Secretary of the Board to the members at least twenty days before the meeting.

SABBATICAL LEAVE

Sabbatical leave of absence for members of the General Faculty is granted under regulations adopted by the Executive Committee of the Trustees on March 28, 1923, revised in 1928, partly in abeyance in the year 1933-34 and the succeeding three years, and restored in the year 1937-38. The conditions on which sabbatical leave of absence is granted are set forth below.

1. Every member of the General Faculty (composed of professors, associate professors, and assistant professors) is eligible for sabbatical leave after six years in the service of the University. Such leave may be taken for a full year at half salary or a half year at full salary.

2. In order to obtain a sabbatical leave written request for such leave must be filed with the President of the University by December 1 of the academic year preceding the one in which the leave is to take effect.

3. If in exceptional cases it should develop that the granting of leave to an applicant during the year for which application is made would raise very serious difficulties detrimental to the best interests of the applicant's department or school, or the interests of the institution as a whole; or because of questions concerning the applicant's period of service prior to the leave, the President shall appoint a committee which shall have power to decide the question of granting the sabbatical leave for the particular year under consideration. This committee shall consist of five members as follows: two members of the general faculty appointed yearly by the President, the Treasurer of the University, the Dean of the school or college of which the applicant is a member, the chairman of the applicant's department, or should no such chairman exist another member of the applicant's department.

4. If this committee should decide against the granting of a sabbatical leave for the year for which the applicant applied, the applicant would be eligible for sabbatical leave the following year or any year thereafter upon making application in due form as above.

5. After September 1, 1928, if a member of the faculty on becoming eligible for sabbatical leave does not for some special reason apply for such leave, he may count the additional years of service prior to his leave towards the six years of service necessary before he can apply for a subsequent leave. If in an exceptional case an applicant for personal reasons applies for a sabbatical leave to be effective in advance of his regular year and such leave is granted, he shall not be eligible for a subsequent leave until he has served six years plus the number of years by which this leave is advanced.

6. On recommendation of the committee after leave of absence has been granted it may be postponed for urgent reasons and under conditions to be determined by the committee.

7. All of those cases which have occurred in the past or which may occur in the future in which leave of absence is granted under conditions where the absentee receives full pay for a half year or half pay or more for a full year's leave of absence, shall be considered as regular sabbatical leave under these regulations.

8. These revised regulations became effective as of September 1, 1928, and sabbatical leaves under such regulations began with the academic year 1929-30. The regulations were partly in abeyance in 1933-34, 1934-35, 1935-36, and 1936-37.

The restoration of the regulations began with the academic year 1937-38. The four years, 1933-34, 1934-35, 1935-36, and 1936-37, may not count toward the six years of service necessary before application can be made for leave of absence. In all cases in which special arrangements have been made for the granting of sabbatical leave (as described in condition No. 7) during the period of partial abeyance of the plan, the next six years of service shall be counted as beginning with the academic year 1937-38. All other members of the General Faculty who apply for sabbatical leave may count the years of service they had to their credit at the beginning of the academic year 1933-34.

RETIREMENT

The following resolution was passed by the Board of Trustees on June 5, 1948:

RESOLVED, That the following regulations shall from the date of the adoption of this resolution govern the retirement of all officers and employees of Duke University:

I. Retirement.

Except as provided in Section II of this resolution all officers and employees of Duke University, except the Chancellor and Vice-Chancellor, shall retire at the end of the academic year in which they attain the age of sixty-nine (69), herein called the normal retirement age.

II. Extension of Service.

By special vote of the Board of Trustees individual extensions of service beyond the normal retirement age may be made for a definite period not to exceed one year, but no such extension shall postpone retirement beyond the end of the academic year in which the age of seventy (70) is attained.

III. Amendment of Retirement Annuity Plan Adopted October 1, 1925.

The retirement annuity plan adopted by Duke University on October 1, 1925, is hereby amended in those respects required to conform said plan with the provisions of this resolution.

IV. Amendment.

The University reserves the right at any time to amend these regulations by lowering the retirement age, or altering or abolishing the provision for extension of service, or otherwise.

Officers of the University for the Year 1953-54



The Corporation

The date in parenthesis indicates the year of election.

THE EXECUTIVE COMMITTEE

NORMAN ATWATER COCKE (1953), <i>ex officio</i> , Chairman	Charlotte, N. C.
GEORGE GARLAND ALLEN (1923)	New York, N. Y.
ARTHUR HOLLIS EDENS (1948), <i>ex officio</i>	Durham, N. C.
PHILLIP FRANK HANES (1954)	Walkertown, N. C.
AMOS RAGAN KEARNS (1948)	High Point, N. C.
ALEXANDER HAMILTON SANDS, JR. (1946)	New York, N. Y.
BUNYAN SNIPES WOMBLE (1950)	Winston-Salem, N. C.
CHRISTINE ALLEN KIMBALL (1945), <i>Recording Secretary</i>	Durham, N. C.

THE UNIVERSITY TRUSTEES

TRUSTEES WHOSE TERM EXPIRES DECEMBER 31, 1955

GEORGE GARLAND ALLEN (1923)	New York, N. Y.
ROBERT GREGG CHERRY (1934)	Gastonia, N. C.
JESSE PAUL FRIZZELLE (1937)	Snow Hill, N. C.
CALVIN BRYAN HOUCK (1951)	Roanoke, Va.
EDWIN LEE JONES (1945)	Charlotte, N. C.
JAMES RAYMOND SMITH (1934)	Mount Airy, N. C.
ESTELLE FLOWERS SPEARS (1951)	Durham, N. C.
RICHARD ELTON THIGPEN (1953)	Charlotte, N. C.

FROM THE ALUMNI

BENJAMIN FERGUSON FEW (1941)	New York, N. Y.
JULIUS WELCH HARRISS (1947)	High Point, N. C.
WILLIAM JULIUS HOBBS (1947)	Atlanta, Ga.
HUBBARD BRAXTON PORTER (1941)	Troy, N. C.

TRUSTEES WHOSE TERM EXPIRES DECEMBER 31, 1957

CHARLES ALBERT CANNON (1949)	Concord, N. C.
HENRY CLAY DOSS (1943)	Detroit, Mich.
PHILLIP FRANK HANES (1948), <i>Vice-Chairman</i>	Walkertown, N. C.
PLEASANT HUBER HANES, JR. (1954)	Winston-Salem, N. C.
WILLIAM WALTER PEELE (1921)	Laurinburg, N. C.
FRANK GRAINGER PIERCE (1954)	Charlotte, N. C.
*PAUL LINDSAY SAMPLE (1950)	McKeesport, Pa.
ALEXANDER HAMILTON SANDS, JR. (1946)	New York, N. Y.
BUNYAN SNIPES WOMBLE (1915)	Winston-Salem, N. C.

* Died, December 8, 1953.

FROM THE ALUMNI

CHARLES PHILLIPS BOWLES (1954)	Charlotte, N. C.
NORMAN EDWARD EDGERTON (1941)	Raleigh, N. C.
AMOS RAGAN KEARNS (1945)	High Point, N. C.
ROBERT ANDREW MAYER (1897)	Charlotte, N. C.
*WALTER ALBERT STANBURY (1933)	Asheboro, N. C.

TRUSTEES WHOSE TERM EXPIRES DECEMBER 31, 1959

NORMAN ATWATER COCKE (1947), <i>Chairman</i>	Charlotte, N. C.
DONALD SILER ELIAS (1929)	Asheville, N. C.
†PLEASANT HUBER HANES (1912)	Winston-Salem, N. C.
JOSEPH LAWRENCE HORNE (1934)	Rocky Mount, N. C.
WALKER PATTERSON INMAN (1949)	Georgetown, S. C.
BENJAMIN EVERETT JORDAN (1943)	Saxapahaw, N. C.
JAMES BUREN SIDBURY (1947)	Wilmington, N. C.
KENNETH CRAWFORD TOWE (1954)	New York, N. Y.
EARLE WAYNE WEBB (1933)	New York, N. Y.

FROM THE ALUMNI

SIDNEY SHERRILL ALDERMAN (1934)	Washington, D. C.
KENNETH MILLIKAN BRIM (1952)	Greensboro, N. C.
EDGAR HARRISON NEASE (1950)	Mount Airy, N. C.
GEORGE ROBERTS WALLACE (1954)	Morehead City, N. C.

TRUSTEES EMERITI

JAMES ARDREY BELL (1920)	Charlotte, N. C.
PLEASANT HUBER HANES (1912)	Winston-Salem, N. C.

COMMITTEES OF THE UNIVERSITY TRUSTEES

Buildings and Grounds: Messrs. Smith, Cherry, Jordan, and Kearns.

Business Administration: Messrs. P. H. Hanes,† Elias, Hobbs, Kearns, and Sands.

Colleges: Messrs. Mayer, P. F. Hanes, and Houck, and Mrs. Spears.

Divinity School: Peele, Edgerton, Nease, Porter, and Stanbury.*

School of Forestry: Messrs. Cherry, Edgerton, Few, and Smith.

Graduate School: Messrs. Webb, Cannon, Doss, and Thigpen.

Law School: Messrs. Womble, Alderman, Cherry, Cocke, Frizzelle, and Pierce.

Library: Messrs. Doss, Allen, Harriss, and Nease.

Medical School and Hospital: Messrs. Elias, Horne, Inman, and Sidbury.

Physical Education and Athletics: Messrs. Smith, Edgerton, P. F. Hanes, Harriss, and Jordan.

Engineering and Research: Messrs. Cocke, Doss, Jones, Jordan, Sands, and Webb.

Cooperation and National Council: Messrs. Sands, Few, Hobbs, Kearns, and Nease.

Public Relations and Publicity: Messrs. Horne, Elias, Harriss, and Wallace.

Officers Emeriti

ALICE MARY BALDWIN, Ph.D., LL.D.

Professor Emerita of History

406 Swift Avenue

HAROLD CRUSIUS BIRD, Ph.B., C.E.

Professor Emeritus of Civil Engineering

1209 Virginia Avenue

JOSEPH PENN BREEDLOVE, M.A.

Librarian Emeritus

407 Watts Street

* Died, March 21, 1954.

† Resigned, February 24, 1954.

- FREDERICK AUGUSTUS GRANT COWPER, Ph.D.
Professor Emeritus of Romance Languages 1017 Dacian Avenue
- CHARLES WILLIAM EDWARDS, A.M., M.S.
Professor Emeritus of Physics 406 Buchanan Boulevard
- WILLIAM STONE FITZGERALD, A.M.
Instructor Emeritus of English 603 Watts Street
- MRS. LILLIAN B. GRIGGS, B.A. in L.S.
Librarian Emeritus 915 Monmouth Avenue
- GEORGE T. HARGITT, Ph.D., Sc.D.
Professor Emeritus of Zoology 811 Watts Street
- FRANKLIN SIMPSON HICKMAN, Ph.D., D.D.
Professor Emeritus of the Psychology of Religion 809 West Maumee Street
 Angola, Ind.
- HUGO CLAUDE HORACK, LL.B., LL.D.
Professor Emeritus of Law 4647 Twenty-Fourth Street, N.W.
 Arlington, Va.
- CHARLES ALBERT KRUMMEL, Ph.D.
Professor Emeritus of German 2118 Englewood Avenue
- WILLIAM THOMAS LAPRADE, Ph.D.
Professor Emeritus of History 1108 Monmouth Avenue
- *JESSE MARVIN ORMOND, B.D., D.D.
Professor Emeritus of Practical Theology 110 Pinecrest Road
- ARTHUR SPERRY PEARSE, Ph.D., LL.D.
Professor Emeritus of Zoology 803 Second Street
- †CHARLES WILLIAM PEPPLER, Ph.D.
Professor Emeritus of Greek 406 Buchanan Boulevard
- ARTHUR MARCUS PROCTOR, Ph.D.
Professor Emeritus of Education 1500 Edgevale Drive
- WILLIAM WALTER RANKIN, JR., M.A.
Professor Emeritus of Mathematics 1011 Gloria Avenue
- GILBERT THEODORE ROWE, S.T.D., D.D., Litt.D.
Professor Emeritus of Christian Doctrine 150 Pinecrest Road
- MRS. BESSIE WHITTED SPENCE, A.M., B.D. 3629 Hope Valley Road, Hope Valley
Assistant Professor Emeritus of Biblical Literature
- HERSEY EVERETT SPENCE, B.D., D.D., Litt.D. 3629 Hope Valley Road, Hope Valley
Professor Emeritus of Religious Education
- MRS. MARY HENDREN VANCE, A.M. 814 Cowper Drive
Assistant Professor Emeritus of English Raleigh, N. C.
- ALBERT MICAIAH WEBB, A.M.
Professor Emeritus of Romance Languages 1017 Trinity Avenue
- ALBAN GREGORY WIDGERY, M.A. 211 South Pleasant Street
Professor Emeritus of Philosophy Amherst, Mass.
- ROBERT NORTH WILSON, M.S.
Professor Emeritus of Chemistry 822 Third Street
- EDWARD HUDSON YOUNG, A.M.
Assistant Professor Emeritus of Romance Languages 107 Watts Street
- * Died, June 24, 1954.
- † Died, May 12, 1953.

Officers of Administration

GENERAL ADMINISTRATION

ARTHUR HOLLIS EDENS, Ph.D., LL.D. <i>President of the University</i>	2138 Myrtle Drive
WILLIAM HANE WANNAMAKER, A.M., Litt.D. <i>Vice-Chancellor of the University</i>	615 West Campus
PAUL MAGNUS GROSS, Ph.D. <i>Vice-President in the Division of Education</i>	3816 Dover Road, Hope Valley
CHARLES EDWARD JORDAN, A.B., LL.D. <i>Vice-President in the Division of Public Relations</i>	813 Vickers Avenue
HERBERT JAMES HERRING, M.A., LL.D. <i>Vice-President in the Division of Student Life</i>	2010 Myrtle Drive
ALFRED SMITH BROWER, A.B. <i>Business Manager and Comptroller</i>	614 West Campus
CHARLES BLACKWELL MARKHAM, A.M. <i>Treasurer of the University</i>	204 Dillard Street

EDUCATIONAL ADMINISTRATION

PAUL MAGNUS GROSS, Ph.D. <i>Vice-President in the Division of Education, and Dean of the University</i>	3816 Dover Road, Hope Valley
RICHARD LOVEJOY TUTHILL, Ed.D. <i>University Registrar</i>	1014 Gloria Avenue

The Colleges

ROBERTA FLORENCE BRINKLEY, Ph.D. <i>Dean of the Woman's College</i>	East Campus
HERBERT JAMES HERRING, M.A., LL.D. <i>Dean of Trinity College</i>	2010 Myrtle Drive
WALTER JAMES SEELEY, E.E., M.S. <i>Dean of the College of Engineering</i>	1005 Urban Avenue
ALAN KREBS MANCHESTER, Ph.D. <i>Dean of Undergraduate Studies</i>	2016 Myrtle Drive
WILLIAM COUNCILL ARCHIE, Ph.D. <i>Associate Dean of Trinity College</i>	2310 Cranford Road
ROBERT B. COX, A.M. <i>Dean of Undergraduate Men</i>	1107 Ninth Street
ELLEN HARRIS HUCKABEE, A.M. <i>Dean of Undergraduate Instruction, Woman's College</i>	1507 W. Pettigrew Street
MARIANNA DUNCAN JENKINS, Ph.D. <i>Associate Dean of Undergraduate Instruction, Woman's College</i>	1026 Minerva Avenue
LEWIS J. McNURLEN, M.A. <i>Assistant Dean of Freshmen and Sophomores, Trinity College</i>	1818 Glendale Avenue
LANIER W. PRATT, M.A. <i>Assistant Dean of Trinity College</i>	2007 Ruffin Street
MARY GRACE WILSON, A.M. <i>Dean of Undergraduate Women</i>	Faculty Apartments
MRS. ELIZABETH ANDERSON PERSONS, A.M. <i>Director of Admissions, Woman's College</i>	612 Swift Avenue
EVERETT BROADUS WEATHERSPOON, A.B. <i>Director of Admissions, Trinity College and the College of Engineering</i>	125 Pinecrest Road
WILLIAM LAMBRETH BRINKLEY, JR., A.B. <i>Assistant Director of Admissions, Trinity College and the College of Engineering</i>	202 Faculty Apartments, East Campus

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- †EDWARD L. ADAMS, JR., Ph.D. Box 71B, Route 1, Old Chapel Hill Road
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Psychometrist, Bureau of Testing and Guidance

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- §CHARLES SACKETT SYDNOR, M.A. (Oxon.), Ph.D., Litt.D., LL.D.
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- MARCUS EDWIN HOBBS, Ph.D.
Dean of the Graduate School of Arts and Sciences 115 Pinecrest Road
- CHARLES EUGENE WARD, Ph.D.
Director of Admissions, Graduate School of Arts and Sciences 2429 Perkins Road
- JAMES CANNON, A.M., Th.M., D.D.
Dean of the Divinity School 2022 Myrtle Drive
- CLARENCE FERDINAND KORSTIAN, Ph.D.
Dean of the School of Forestry 4 Sylvan Road
- JOSEPH A. MCCLAIN, JR., J.S.D., LL.D.
Dean of the School of Law 2021 Myrtle Drive
- WILBURT CORNELL DAVISON, D.Sc., M.D., LL.D.
Dean of the School of Medicine Hope Valley
- FLORENCE K. WILSON, R.N., M.A.
Dean of the School of Nursing Faculty Apartments
- PAUL HIBBERT CLYDE, Ph.D.
Director of the Summer Session 1311 Carolina Avenue
- OLAN L. PETTY, Ph.D.
Assistant Director of the Summer Session 1618 North Duke Street

* Resigned, July 31, 1953.

† Resigned, May 31, 1953.

‡ Resigned, August 31, 1953.

§ Died, March 2, 1954.

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Treasurer of the University

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Secretary of the University

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Associate Secretary of the University

2111 Ruffin Street

WILLIAM EDWARD WHITFORD, A.B.

Director of Operation and Maintenance

146 Pinecrest Road

THEODORE WARREN MINAH, B.S. in H.M.

Director of Dining Hall Operations

2117 Club Boulevard

MARY ROBINSON, B.A., B.S.

Manager, the Dining Halls, Woman's College

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*LAURA MARGUERITE DEYOE, B.S.

Manager, the Dining Halls, Men's Graduate Center

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JOHN ELLWOOD DOXEY, A.M.

Purchasing Agent

1004 Broad Street

JESSE DAVID WELLONS, JR.

Manager of Stores Operations

2703 Augusta Drive

WALTER GLEN COOPER, B.A.

Personnel Director

1008 North Gregson Street

WILLIAM KENNETH HOWARD, B.S.

Maintenance Engineer

106 Pinecrest Road

HENRY FRANKLIN BOWERS, A.B.

Manager of Operations

2505 Perkins Road

ERNEST LEE HAYWOOD, A.B.

Chief Accountant

104 Hilton Avenue

†HARRY L. KELLER, C.P.A.

Supervisor, Budgets and Reports

1 Carolee Apartments

KENNETH R. MANNING, A.B.

Supervisor, Tabulating Department

Duke University Apartments

HENRY SPECK MORGAN, A.B.

Chief Clerk, Treasurer's Office

409 Francis Street

‡ROBERT BEVERIDGE FEARING

Adviser, Student Activities

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CARL A. BOY

Superintendent of Utilities

2214 Erwin Road

JOHN C. GIFT

Superintendent of Building Maintenance

811 Fifth Street

* Resigned, August 31, 1953.

† Resigned, January 31, 1953.

‡ Died, February 17, 1954.

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- GLENN EDWARD MANN, A.B.
Director, Office of Athletic Information Cole Mill Road
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Director, Appointments Office 16 Alastair Court

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- ROGER L. MARSHALL, A.B.
Editor, Alumni Register, and Assistant to the Director 1829 Forest Road
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Secretary of Local Associations Cornwallis Road
- PATSY G. MCKAY, A.B.
Recorder Route 2, Roxboro Road
- JAMES J. WHITLEY, JR.
University Photographer 2509 Banner Street

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- PAUL MCB. ABERNETHY (1952), M.D.
Instructor in Ophthalmology Burlington, N. C.
- *ARTHUR F. ABT (1952), M.D.
*Professor of Pediatrics; Director of
 Radioisotope Unit, Veterans Hospital* Duke Hospital
- FRANCES DOROTHY ACOMB (1945), Ph.D.
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- JOHN W. ALLGOOD (1951), M.D.
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* Resigned, December 31, 1953.

† Resigned, August 31, 1953.

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Associate Professor of Otolaryngology and Ophthalmology 415 Carolina Circle
- THEODORE WINSLOW ATWOOD (1934), D.M.D.
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- *JOSEPH RANDLE BAILEY (1946), Ph.D.
Assistant Professor of Zoology Department of Zoology, Duke University
- LENOX DIAL BAKER (1947), M.D.
Professor of Orthopaedic Surgery 3106 Cornwall Road, Hope Valley
- ROGER D. BAKER (1930-1942; 1952), M.D.
Professor of Pathology 303 Swift Avenue
- MARIE BALDWIN (1949), M.D.
Associate in Psychiatry Duke Hospital
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Instructor in Sociology Randolph Road, Route 1
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Lecturer in Church Music 2401 Cranford Road
- †ROBERT D. BARNES (1952), B.S.
Instructor in Zoology University Apartments

* Absent on sabbatical leave, 1953-54.

† Resigned, August 31, 1953.

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Associate in Psychiatry 1503 Alabama Street
- WOODROW BATTEN (1951), M.D.
Instructor in Medicine 332 South Third Street, Smithfield, N. C.
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- WALTER PAUL BAUM (1953), Ph.D.
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- GEORGE JAY BAYLIN (1939), M.D.
Professor of Radiology and Associate in Anatomy 2260 Cranford Road
- CHARLES A. BAYLIS (1952), Ph.D.
Professor of Philosophy 601 East Markham Avenue
- WILLIAM WALDO BEACH (1946), B.D., Ph.D.
Professor of Christian Ethics 100 Vineyard Street
- MRS. DOROTHY WATERS BEARD (1938), R.N.
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- JOSEPH WILLIS BEARD (1937), M.D.
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- ROLAND FREDERICK BECKER (1951), Ph.D.
Associate Professor of Anatomy 1010 Monmouth Avenue
- WALTER R. BENSON (1952), M.D.
Instructor in Pathology 947 Lambeth Circle, Poplar Apartments
- FREDERICK BERNHEIM (1930), Ph.D.
Professor of Pharmacology Woodridge Drive
- MRS. MARY LILIAS CHRISTIAN BERNHEIM (1930), Ph.D.
Associate Professor of Biochemistry Woodridge Drive
- MRS. LYDIA BERNSTEIN (1953), B.M., M.S.
Visiting Instructor in Music 103 North Street, Chapel Hill, N. C.
- EDWARD WILLARD BERRY (1936), Ph.D.
Professor of Geology 1003 North Gregson Street
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- MRS. HELEN SMITH BEVINGTON (1943), M.A.
Assistant Professor of English Box 94, Route 2, Guess Road
- MERLE MOWBRAY BEVINGTON (1952), Ph.D.
Associate Professor of English Box 94, Route 2, Guess Road
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Instructor in Medicine Duke Hospital
- MARTIN LEE BLACK, JR. (1930), M.B.A., C.P.A.
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- *WILLIAM MAXWELL BLACKBURN (1926), Ph.D.
Professor of English 2101 Ward Street
- EMIL BLAIR (1952), M.D.
Instructor in Medicine Elder Street

* Absent on sabbatical leave, fall semester, 1953-54.

- ROBERT LINCOLN BLAKE (1949)
Associate in Medical Art and Illustration 609 Ruby Street
- ROBERT BLEKE (1953), Ph.D.
Lecturer in Psychology 1004 Carolina Avenue
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Assistant Professor of Physics and Research Associate
- HUGO LEANDER BLOMQUIST (1920), Ph.D.
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Associate in Neurosurgery 2302 Erwin Road
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Assistant Professor of Physical Education F2C University Apartments
- †BEATRICE BOERICKE (1953), B.A., P.T.
Instructor in Physical Therapy
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- EDWARD CLAUDE BOLMEIER (1948), Ph.D.
Professor of Education 217 Faculty Apartments
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Associate Professor of Music 2314 West Club Boulevard
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Associate Professor of Zoology 1307 Alabama Avenue
- MRS. ELIZABETH CIRCLE BOOKHOUT (1932-43; 1945), M.S.
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- LLOYD J. BORSTELMANN (1953), Ph.D.
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- ELBERT VICTOR BOWDEN (1952), M.A.
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- ‡JEAN D. BOWEN (1952), Ph.D.
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- GILMORE BOWERS (1953), B.S. in E.E.
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- DAVID GILBERT BRADLEY (1949), Ph.D.
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* Absent on leave, 1953-54.

† Resigned, October 31, 1953.

‡ Resigned, August 31, 1953.

§ Absent on leave, spring semester, 1953-54.

** Absent on leave, spring semester, 1952-53.

- HAROLD L. BRADLEY (1940), B.S.
Instructor in Physical Education 1903 Washington Street
- CHARLES KILGO BRADSHAW (1939), Ph.D.
Associate Professor of Chemistry 118 Pinecrest Road
- JOHN SAEGER BRADWAY (1931), A.M., LL.B.
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- *MRS. HELEN EELS BROCK (1952), B.E., R.N., B.S.
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- ROBERT MAURICE BRODERSON (1952), M.F.A.
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Instructor in Department of Education* 4 Duke University Apartments
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- ELMER L. BROOKS (1953), M.A.
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- IVAN WILLARD BROWN, JR. (1940-42; 1945), M.D.
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- WADE GILLIES BROWN (1947), A.B.
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- WILLIAM HUGH BROWNLIE (1948), Th.M., Ph.D.
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* Resigned, November 30, 1953.

† Resigned, January 31, 1954

‡ Resigned, December 31, 1952 .

- JASPER LAMAR CALLAWAY (1937), M.D.
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- BENJAMIN GUY CHILDS (1924), M.A.
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- †MARGARET CHURCH (1946), Ph.D.
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* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, August 31, 1953.

- ELON HENRY CLARK (1934)
Professor of Medical Art and Illustration 1300 Oakland Avenue
- KENNETH WILLIS CLARK (1931), Ph.D.
Professor of New Testament Language and Literature 1308 West Markham Avenue
- LELIA ROSS CLARK (1949), R.N., M.A.
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Assistant Professor of Air Science 1109 North Gregson Street
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- MAURICE H. CLARKE (1953), B.S., Lieutenant Colonel, U. S. Marine Corps
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- *JAMES T. CLELAND (1945), M.A., S.T.M., D.D., Th.D.
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- PAUL HIBBERT CLYDE (1937), Ph.D.
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- CLARENCE H. COBB (1934), Ph.G.
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- †THEODORE STANLEY COILE (1935), Ph.D.
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- ROBERT TAYLOR COLE (1935), Ph.D.
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- JOHN P. COLLINS (1948), M.D.
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- **EVELYN VAIL COONRAD (1952), M.D.
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* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, January 31, 1954.

‡ Absent on part-time leave, spring semester, 1953-54.

§ Resigned, January 18, 1954.

** Resigned, November 15, 1953.

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- ROBERT LAWRENCE CRAIG (1938), M.D.
Associate in Psychiatry Duke Hospital
- ROBERT NOWELL CREADICK (1946), M.D.
Associate Professor of Obstetrics and Gynecology 1200 Anderson Street
- MASON CRUM (1930), Ph.D., Litt.D.
Professor of Biblical Literature 912 Anderson Street
- JOHN SHELTON CURTISS (1945), Ph.D.
Professor of History Route 2, Box 95, Guess Road
- ROBERT EARL CUSHMAN (1945), B.D., Ph.D.
Professor of Systematic Theology 130 Pinecrest Road
- W. KENNETH CUYLER (1938), Ph.D.
Research Instructor in Obstetrics Box 19, Route 1, Durham, N. C.
- BINGHAM DAI (1943), Ph.D.
Professor of Psychology, and Professor of Medical Psychology 2404 Perkins Road
- BOYD LEE DANIELS (1952), B.D.
Instructor in Undergraduate Religion 330 Clark Street
- WILLIAM DAVID DAVIES (1950), B.D., D.D.
Professor of Biblical Theology 810 Second Street
- GIFFORD DAVIS (1930), Ph.D.
Professor of Romance Languages 2248 Cranford Road
- MRS. ATALA THAYER SCUDDER DAVISON (1942), M.D.
Associate in Pediatrics Fairways, Hope Valley
- WILBURT CORNELL DAVISON (1927), M.D., D.Sc., LL.D.
James B. Duke Professor of Pediatrics Fairways, Hope Valley
- HOWARD W. DAWSON (1953), B.S., Lieutenant Commander, U. S. Navy
Assistant Professor of Naval Science 909 Arnette Avenue
- ALEXANDER DeCONDE (1952), Ph.D.
Assistant Professor of History 1515 Woodburn Road
- JOHN ESSARY DEES (1939), M.D.
Professor of Urology 413 Carolina Circle
- MRS. SUSAN COONS DEES (1939), M.D.
Associate Professor of Pediatrics and Allergy 413 Carolina Circle
- *DAVID C. DELLINGER (1951), B.S.M.E., Captain, U. S. Air Force
Instructor in Air Science L3C University Apartments
- WILLIAM J. A. DEMARIA (1951), M.D.
Assistant Professor of Pediatrics 2721 Brown, Avenue, Poplar Apartments
- JEAN-JACQUES DEMOREST (1948), Ph.D.
Assistant Professor of Romance Languages 2428 Perkins Road
- WILLIAM ERNEST DeTURK (1949), M.D., Ph.D.
Assistant Professor of Pharmacology 1212 Ruffin Street
- FRANK TRAVER DeVYVER (1935), Ph.D.
Professor of Economics 8 Sylvan Road

* Resigned, August 31, 1953.

- DONALD J. DEWEY (1950), M.A.
Assistant Professor of Economics 611 Watts Street
- MACDONALD DICK (1932), M.D.
*Assistant Professor of Physiology and Pharmacology,
 and Associate in Medicine* Norwich Way, Hope Valley
- ROBERT L. DICKENS (1949), M.S., C.P.A.
Assistant Professor of Accounting 1506 Carolina Avenue
- RUSSELL LESLIE DICKS (1949), B.D., D.D., D.Litt.
*Associate Professor of Pastoral Care and
 Chaplain to Duke Hospital* 2308 Prince Street
- DANIEL LAFAYETTE DONOVAN (1953), M.D.
Instructor in Medicine 827 Louise Circle, Poplar Apartments
- MRS. MARIE-THERESE LINIERE DOW (1934), L. ès L., M.A.
Instructor in Romance Languages 2252 Cranford Road
- NEAL DOW (1934), Ph.D.
Associate Professor of Romance Languages 2252 Cranford Road
- ANTHONY CHARLES DRAGO (1953), B.S. in P.E.
Instructor in Physical Education 1318 Gregson Street
- FRANCIS GEORGE DRESSEL (1929), Ph.D.
Professor of Mathematics 309 Francis Street
- KENNETH LINDSAY DUKE (1940), Ph.D.
Associate Professor of Anatomy 701 West Club Boulevard
- *BRADFORD DUNHAM (1950), Ph.D.
Instructor in Philosophy 603 Watts Street
- †OSCAR DUQUE (1951), M.D.
Associate in Pathology 826 Louise Circle, Poplar Apartments
- ROBERT F. DURDEN (1952), Ph.D.
Instructor in History 2812 Erwin Road, Poplar Apartments
- GEORGE SHARP EADIE (1930), Ph.D.
Professor of Physiology and Pharmacology 3433 Dover Road, Hope Valley
- WATT WEEMS EAGLE (1930), Ph.D.
Professor of Otolaryngology 804 Anderson Street
- MRS. ELEANOR BEAMER EASLEY (1934), M.D.
Associate in Obstetrics and Gynecology Guess Road
- ‡HOWARD EASLEY (1930), Ph.D.
Associate Professor of Education Guess Road
- §FREDERICK THOMAS EASTWOOD (1951), M.D.
Instructor in Pediatrics 1839 West Smallwood Drive, Raleigh, N. C.
- EDWARD ARTHUR ECKERT (1953), Ph.D.
Instructor in Bacteriology 1302 Lakewood Avenue
- RUTH BUCHANAN EDDY (1952), M.S.
Assistant Professor of Physical Education 213 Faculty Apartments
- **JOSHUA L. EDWARDS (1951), M.D.
Associate in Pathology 802 Louise Circle, Poplar Apartments
- FRANK NICHOLAS EGERTON (1945), A.M., E.E.
Assistant Professor of Electrical Engineering 411 North Gregson Street

* Resigned, August 31, 1953.

† Resigned, July 31, 1953.

‡ Absent on sabbatical leave, 1953-54.

§ Absent on leave, September 1, 1953, to September 1, 1954.

** Resigned, June 30, 1953.

- SAMUEL L. ELMON (1949), M.D.
Instructor in Medicine 225 Green Street, Fayetteville, N. C.
- WILLIAM WHITFIELD ELLIOTT (1925), Ph.D.
Professor of Mathematics Hillendale Road
- LEON HUBBARD ELLIS (1947), Ph.D.
Lecturer in Political Science 2428 Perkins Road
- ERNEST ELSEVIER (1950), M.S. in M.E.
Assistant Professor of Mechanical Engineering Route 1, Hillsboro, N. C.
- JOHN RICHARD EMLET (1952), M.D.
Associate in Surgery 2521 Pickett Road
- FRANK LIBMAN ENGEL (1947), M.D.
*Associate Professor of Medicine and
Associate in Physiology* 1302 Oakland Avenue
- JESSE HARRISON EPPERSON (1930), B.S.
Instructor in Preventive Medicine and Public Health 1601 Hermitage Court
- E. HARVEY ESTES (1953), M.D.
Instructor in Medicine 807 Louise Circle, Poplar Apartments
- *MARY ELLEN ESTILL (1949), Ph.D.
Instructor in Mathematics J3A University Apartments
- JOHN WENDELL EVERETT (1932), Ph.D.
Professor of Anatomy 2605 University Drive
- WILLIAM MARTIN FAIRBANK (1952), Ph.D.
Associate Professor of Physics 2016 Perishing Street
- CARMEN M. FALCONE (1946), M.A.
Assistant Professor of Physical Education University Apartments
- WILLIAM WINFREE FARLEY (1951), M.D.
Instructor in Pediatrics 817 Hillsboro Street, Raleigh, N. C.
- BLAKE FAWCETT (1952), M.D.
Instructor in Surgery 324 Monmouth Avenue
- JOHN MORTON FEIN (1950), Ph.D.
Assistant Professor of Romance Languages 942 Lambeth Circle, Poplar Apartments
- JAMES RONE FELTS, JR. (1949)
Instructor in Hospital Administration 700 Clement Avenue, Charlotte, N. C.
- ARTHUR BOWLES FERGUSON (1939), Ph.D.
Associate Professor of History Route 2, Guess Road
- GEORGE BURTON FERGUSON (1937), M.D.
Associate in Bronchoscopy 3938 Dover Road, Hope Valley
- BERNARD F. FETTER (1951), M.D.
Associate in Pathology 803 Demerius Street
- *ROBERT JAMES FILER (1951), Ph.D.
Assistant Professor of Psychology 915 Lambeth Circle, Poplar Apartments
- †EDGAR BEAUREGARDE FISHER (1953), B.D.
Lecturer in Practical Theology 2000 Cedar Street
- WALTER CLEVELAND FITZGERALD (1951), M.D.
Instructor in Dermatology and Syphilology 2 Chambers Street, Danville, Va.
- ENOLA SUE FLOWERS (1953), B.S.
Instructor in Physical Therapy Apartment 7, Emile Apartments, Roxboro Road

* Resigned, August 31, 1953.

† Spring semester, 1953-54.

- MERLE FOECKLER (1953), A.B., M.S.
Instructor in Social Service 2728 Brown Avenue, Poplar Apartments
- *WILEY DAVIS FORBUS (1930), M.D.
Professor of Pathology 3309 Devon Road, Hope Valley
- JOEL CLARENCE FORD, JR. (1953), B.S., Captain, U. S. Navy
Professor of Naval Science 2101 Myrtle Drive
- LESTER R. FORD, JR. (1953), Ph.B., S.M., Ph.D.
Research Instructor in Mathematics 9 Fifth and Markham Avenue
- JOHN ALVIS FOWLER (1953), M.D.
Assistant Professor of Psychiatry 1-20-A Glen Lennox Apartments,
Chapel Hill, N. C.
- CARLYLE JAMES FRAREY (1952), M.S.
Assistant Professor in the Faculty of Arts and Sciences 819 Demerius Street
- RUSSELL A. FRASER (1952), Ph.D.
Instructor in English 908 Shepherd Street
- CHARLES DARBY FULTON, JR. (1950), Sc.D.
Assistant Professor of Mechanical Engineering 1507 Pettigrew Street
- CLARENCE ELLSWORTH GARDNER, JR. (1930), M.D., D.Sc.
Professor of Surgery 3106 Devon Road, Hope Valley
- WILLIAM HENRY GARDNER, JR. (1953), B.S. in C.E., M. Engg.
Assistant Professor of Civil Engineering 2108 Cole Road
- †ELIZABETH GARMAN (1952), R.N., B.S.
Instructor in Surgical Nursing Hanes House
- NORMAN GARMIEZY (1950), Ph.D.
Assistant Professor of Psychology 3423 Hope Valley Road, Hope Valley
- NORMAN H. GARRETT, JR. (1953), M.D.
Instructor in Medicine 860 Louise Circle, Poplar Apartments
- OTTO H. GAUER (1953), M.D.
Associate Professor of Physiology and Pharmacology Route 1, Box 113, Durham, N. C.
- NICHOLAS G. GEORGAIDE (1951), D.D.S., M.D.
Assistant Professor of Plastic Surgery 2417 Bruton Road
- JOHN JAY GERGEN (1936), Ph.D.
Professor of Mathematics 2803 Nation Avenue
- ALLAN H. GILBERT (1920), Ph.D.
Professor of English 530 Compton Place
- ‡STEPHEN ARNOLD GINN (1950), M.D.
Associate in Psychiatry 2517 Glendale Avenue
- §RENÉ GIRARD (1952), Ph.D.
Instructor in Romance Languages 1004 Carolina Avenue
- JOHN GLASSON (1952), M.D.
Instructor in Orthopaedics 615 Swift Avenue
- GEORGE G. GLOCKLER (1952), Ph.D.
Visiting Lecturer in Chemistry 3309 Avon Road, Hope Valley
- CLARENCE GOHDES (1930), Ph.D.
Professor of English 2614 Stuart Drive
- JOSEPH LEONARD GOLDNER (1950), M.D.
Assistant Professor of Orthopaedics 906 Demerius Street

* Absent on leave, July 15, 1953, to January 15, 1954.

† Resigned, May 11, 1953.

‡ Resigned, June 30, 1953.

§ Resigned, August 31, 1952

- JEWETT GOLDSMITH (1949), M.D.
Assistant Professor of Psychiatry 918 Monmouth Avenue
- SANFORD GOLDSTONE (1953), Ph.D.
*Associate in Clinical Psychology in the
 Department of Psychiatry and Lecturer in
 the Department of Psychology* 894 Louise Circle, Poplar Apartments
- WILLIAM LEWIS GORDON (1952), Ph.D.
Instructor in Mathematics 13 Fifth and Markham Avenue
- WALTER GORDY (1946), Ph.D.
Professor of Physics 2521 Perkins Road
- WILLIAM ALEXANDER GRAHAM (1938), M.D.
Instructor in Obstetrics and Gynecology 2247 Cranford Road
- RICHARD BABSON GRANT (1952), Ph.D.
Instructor in Romance Languages Apartment 4, 904 Second Street
- *LAWRENCE EUGENE GRAVES (1952), M.A.
Instructor in English 2206 Pike Street
- CYRUS L. GRAY (1952), M.D.
Instructor in Radiology 219 Boulevard Street, High Point, N. C.
- IRVING EMERY GRAY (1930), Ph.D.
Professor of Zoology 124 Pinecrest Road
- ROBERT HAROLD GREKIN (1952), M.D.
Instructor in Dermatology and Syphilology Box 154, Route 2, Roxboro Road
- EUGENE GREULING (1948), Ph.D.
Associate Professor of Physics 2414 Perkins Road
- KEITH SANFORD GRIMSON (1930-42; 1945), M.D.
Professor of Surgery 3313 Devon Road, Hope Valley
- PAUL MAGNUS GROSS (1919), Ph.D.
William Howell Pegram Professor of Chemistry 3816 Dover Road, Hope Valley
- JULIA REBECCA GROUT (1924), M.S.
Professor of Physical Education 804 Fourth Street
- CHARLES GROSHON GUNN, JR. (1953), M.D.
Instructor in Medicine 820 Louise Circle, Poplar Apartments
- NORMAN GUTTMAN (1951), Ph.D.
Assistant Professor of Psychology 854 Louise Circle, Poplar Apartments
- ROSE HAHOLA (1952), R.N.
Instructor in Pediatric Nursing 920 Second Street
- HOWARD N. HAINES (1943), B.S.
Visiting Assistant Professor of Civil Engineering 2307 Club Boulevard
- FRANK GREGORY HALL (1926-42; 1945), Ph.D.
Professor of Physiology and Pharmacology 122 Pinecrest Road
- HUGH MARSHALL HALL (1952), Ph.D.
Instructor in Political Science 7 Duke University Apartments
- LOUISE HALL (1931), S.B. Arch., Ph.D.
Associate Professor of Architecture Box 6636, College Station
- †WILLIAM HOLLAND HALL (1915), A.M., M.S.C.E.
J. A. Jones Professor of Engineering 922 Urban Avenue
- JOHN HAMILTON HALLOWELL (1942), Ph.D.
Professor of Political Science 2709 Augusta Drive

* Resigned, August 31, 1953.

† Absent on sabbatical leave, fall semester, 1953-54

- EDWIN CROWELL HAMBLEN (1931), M.D.
Associate Professor of Obstetrics and Gynecology,
and Professor of Endocrinology 810 Forest Hills Boulevard
- *GEORGE WALTER HAMBRICK, JR. (1952), M.D.
Associate in Dermatology and Syphilology 8 Glenn Apartments
- WILLIAM BASKERVILLE HAMILTON, JR. (1936), Ph.D.
Professor of History 2256 Cranford Road
- LADD W. HAMRICK (1953), M.D.
Instructor in Medicine 703 Jackson Street
- PHILIP HANDLER (1939), Ph.D.
Professor of Biochemistry and Nutrition 2529 Perkins Road
- FRANK ALLAN HANNA (1948), Ph.D.
Professor of Economics 2239 Cranford Road
- OSCAR CARL EDVARD HANSEN-PRUSS (1930), M.D. 3303 Surrey Road, Hope Valley
Professor of Medicine in Charge of Clinical Microscopy
- †EARL THOMAS HANSON (1946), Ph.D.
Assistant Professor of Political Science 613 Swift Avenue
- ELLWOOD SCOTT HARRAR (1936), Ph.D.
Professor of Wood Technology 2228 Cranford Road
- †ROBERT BRENT HARRELL (1950), A.B., Commander, U. S. Navy
Associate Professor of Naval Science 1405 North Duke Street
- GEORGE PARKER HARRIS (1932), A.B.
Instructor in Hospital Administration 2156 Colony Road, Charlotte, N. C.
- JEROME SYLVAN HARRIS (1936), M.D.
Professor of Pediatrics, and
Associate Professor of Biochemistry 1007 Rosehill Avenue
- FRANCIS PARKS HARRISON (1947), M.A.
Assistant Professor of Physical Education 2511 Pickett Road
- HORNELL NORRIS HART (1938), Ph.D.
Professor of Sociology 2535 Perkins Road
- JULIAN DERYL HART (1930), M.D.
Professor of Surgery Route 1, Duke University Road
- †GEORGE CORBIN HARWELL (1935), Ph.D.
Assistant Professor of English 2115 Wilson Street
- CHARLES CLEVELAND HATLEY (1917), Ph.D.
Professor of Physics 708 Buchanan Boulevard
- ROGER K. HAUGEN (1953), M.D.
Instructor in Pathology Bowling Creek Road, Chapel Hill, N. C.
- CHARLES ROY HAUSER (1929), Ph.D.
Professor of Chemistry 1020 Rosehill Avenue
- CAROLINE ELIZABETH HELMICK (1949), M.D.
Associate in Preventive Medicine and Public Health, and
Director of Student Health, Woman's College East Campus
- JAMES PAISLEY HENDRIX (1938), M.D.
Associate Professor of Medicine and Therapeutics 144 Pinecrest Road
- §JOHN WILLIAM HENDRIX (1947), M.S.
Instructor in Physical Education 1019 Oakland Avenue

* Resigned, December 31, 1952.

† Absent on sabbatical leave, spring semester, 1953-54.

‡ Resigned, April 17, 1953.

§ Resigned, August 31, 1953.

- STEPHEN DUNCAN HERON, JR. (1950), M.S.
Instructor in Geology Apartment 12, Duke University Apartments
- *HOWARD EGBERT HERRING (1952), M.D.
Instructor in Medicine 2720 Brown Avenue, Poplar Apartments
- DUNCAN CHARTERIS HETHERINGTON (1930), Ph.D., M.D.
Professor of Anatomy K3B University Apartments
- ALBERT HEYMAN (1953), M.D.
Associate Professor of Medicine Duke Hospital
- JOSEPH S. HIATT (1953), M.D.
Instructor in Medicine Duke Hospital
- JOHN BAMBER HICKAM (1947), M.D.
Associate Professor of Medicine N2B University Apartments
- ARTHUR OWEN HICKSON (1929), Ph.D.
Assistant Professor of Mathematics 2712 Legion Avenue
- DOUGLAS GREENWOOD HILL (1931), Ph.D.
Professor of Chemistry Box 275, Route 2, St. Mary's Road
- †EDGAR LAFAYETTE HILLMAN (1951), B.D., D.D.
Visiting Lecturer in Practical Theology 1002 Knox Street
- MARCUS EDWIN HOBBS (1935), Ph.D.
Professor of Chemistry 115 Pinecrest Road
- LESLIE BENJAMIN HOHMAN (1946), M.D.
Professor of Psychiatry 616 Ruby Street
- ‡BERNARD CLEVELAND HOLLAND (1948), M.D.
Associate in Medicine 705 Louise Circle, Poplar Apartments
- RAY WALTER HOLLAND (1947), M.S. in M.E.
Assistant Professor of Mechanical Engineering 2528 Glendale Avenue
- IRVING BRINTON HOLLEY, JR. (1947), Ph.D.
Assistant Professor of History 6 Duke University Apartments
- CHARLES M. HOLMES (1953), M.A.
Instructor in English 911 Englewood Avenue
- FRANCES VIRGINIA LEE HOLTON (1947), M.A.
Assistant Professor of Physical Education 407 Erwin Apartments
- CALVIN BRYCE HOOVER (1925), Ph.D., Litt.D.
James B. Duke Professor of Economics 1702 Duke University Road
- EDWARD CHARLES HORN (1946), Ph.D.
Assistant Professor of Zoology 2509 Cascadilla Street
- §MRS. SARA PRIVATT HORNE (1953), R.N., B.S.N., B.S. in N.Ed.
Instructor in Medical Nursing 874 Louise Circle, Poplar Apartments
- STEPHEN FRANCIS HORNE (1950), M.D.
Instructor in Dermatology and Syphilology 380 South Main Street,
 Rocky Mount, N. C.
- AUBREY THOMAS HORNSBY (1953), M.D.
*Assistant Professor of Radiology, and Chief of
 the Radiological Department, Veterans Hospital* 420 Carolina Circle
- RAYMOND LOUIS HOWARD (1953)
Instructor in Medical Photography 108 East Club Boulevard
- JAY BROADUS HUBBELL (1927), Ph.D., Litt.D.
Professor of English 121 Pinecrest Road

* November 1, 1952, to July 31, 1953.

† Fall semester, 1953-54.

‡ Absent on leave, August 1, 1953, to July 1, 1954.

§ Resigned, October 31, 1953.

- WAYLAND ELROY HULL (1953), Ph.D.
Assistant Professor of Physiology Apartment N-1, 819 Demerius Street
- DON DOUGAN HUMPHREY (1945), Ph.D.
Professor of Economics 2802 Legion Avenue
- *MRS. WANDA SANBORN HUNTER (1947), Ph.D.
Associate Professor of Zoology 800 Louise Circle, Poplar Apartments
- †THELMA MARGUERITE INGLES (1949), R.N., M.A.
Assistant Professor of Nursing Education;
Director, Division of Nursing Education 854 Louise Circle, Poplar Apartments
- WILLIAM HENRY IRVING (1936), B.A. (Oxon.), Ph.D.
Professor of English 2707 Legion Avenue
- CHARLES EDWIN IRWIN (1946), M.D.
Lecturer in Orthopaedic Surgery Duke Hospital
- ANNE MADELINE JACOBANSKY (1953), R.N., B.S.N.E., M.Ed.
Assistant Professor of Nursing in Charge
of Nursing Education 854 Louise Circle, Poplar Apartments
- JULIAN E. JACOBS (1936-38; 1947), M.D.
Lecturer in Orthopaedics 819 Fourth Street
- MARIANNA DUNCAN JENKINS (1948), Ph.D.
Associate Professor of Art 1026 Minerva Avenue
- HOWARD EIKENBERRY JENSEN (1931), B.D., Ph.D.
Professor of Sociology 143 Pinecrest Road
- WALLACE NORUP JENSEN (1953), M.D.
Assistant Professor of Medicine L-26-D, Glen Lennox, Chapel Hill, N. C.
- FREDERICK CHARLES JOERG (1947), M.B.A.
Associate Professor of Economics 1400 Oakland Avenue
- ‡CHARLES E. JOHNSON (1952), M.A.
Instructor in English 1400 Duke University Road
- DAVID SPIRES JOHNSON (1953), M.D.
Instructor in Pathology Apartment 10-C, 2904 Erwin Road
- MRS. DOROTHY MERLYN JOHNSON (1953), B.S., M.S.W.
Instructor in Social Service 212 Faculty Apartments
- DAVID H. JOHNSTON (1953), M.D.
Instructor in Medicine 2707 Hillsboro Road
- ‡DOROTHY JOHNSTON (1952), R.N., B.S., C.P.H.N.
Assistant Professor of Nursing Education 107 Hanes House
- EDWARD ELLSWORTH JONES (1953), Ph.D.
Assistant Professor of Psychology and
Associate in Clinical Psychology in the
Department of Psychiatry 869 Louise Circle, Poplar Apartments
- ARCHIBALD CURRIE JORDAN (1925), M.A.
Assistant Professor of English 147 Pinecrest Road
- BRADY RIMBEY JORDAN (1927), Ph.D.
Professor of Romance Languages 117 Pinecrest Road
- HELEN LOUISE KAISER (1943), R.P.T.T.
Assistant Professor of Physical Rehabilitation 804 Fourth Street
- WILLIAM ARTHUR KALE (1952), B.D., D.D.
Professor of Practical Theology 1011 Dacian Avenue

* Absent on sabbatical leave, spring semester, 1953-54.

† Absent on leave, fall semester, 1953-54.

‡ Resigned, August 31, 1953.

- HARRY I. KALISH (1953), Ph.D.
Visiting Assistant Professor of Psychology 902 East Club Boulevard
- HENRY KAMIN (1948), Ph.D.
Associate in Biochemistry J3C University Apartments
- MICHAEL J. KEITH (1953), M.D.
Instructor in Psychiatry Highland Hospital, Asheville, N. C.
- WALTER KEMPNER (1934), M.D.
Professor of Medicine 1505 Virginia Avenue
- HAYWARD KENISTON (1952), Ph.D.
Visiting Lecturer in Romance Languages 214 Faculty Apartments
- *JAMES STEWART KENNEDY (1951), B.S., Lieutenant, U. S. Navy
Assistant Professor of Naval Science 1613 Dexter Street
- VAN LESLIE KENYON, JR. (1945), M.M.E.
Associate Professor of Mechanical Engineering Route 2, Hillsboro, N. C.
- †MRS. NANCY PEELER KEPPEL (1953), B.A.
Instructor in Physical Education Poplar Apartments
- GRACE PARDRIDGE KERBY (1947), M.D.
Assistant Professor of Medicine 707 Louise Circle, Poplar Apartments
- ‡GEORGE WALLACE KERNODLE (1949), M.D.
Instructor in Pediatrics 305 West Front Street, Burlington, N. C.
- EILEEN DOROTHY KIERNAN (1952), R.N., B.S.N.E.
Instructor in Nursing of Prematures 854 Louise Circle, Poplar Apartments
- GREGORY A. KIMBLE (1952), Ph.D.
Associate Professor of Psychology 1808 Hillcrest Drive
- JOHN TALBERT KING (1951), M.D.
Instructor in Pediatrics 306 West Davis Street, Burlington, N. C.
- *VERNON KINROSS-WRIGHT (1949), B.M. (Oxon.), D.P.M.
*Associate in Psychiatry; Director of Durham
 Child Guidance Clinic* Box 79, Route 3, Durham, N. C.
- WILLIAM KLENZ (1947), M.A.
Assistant Professor of Music 15 Alastair Court
- ROBERT J. KNIGHT, JR. (1952), B.S., Colonel, U. S. Air Force
Professor of Air Science and Tactics 2107 Wilson Street
- LOIS NINA KNOWLES (1953), R.N., B.S.N.
Instructor in Nursing Arts 2201 Woodrow Street
- RUTH M. KOCH (1953), M.S.
Assistant Professor and Counselor in the School of Nursing 224-226 Hanes House
- §SIGMUND KOCH (1942-47; 1948), Ph.D.
Professor of Psychology 2921 Horton Road
- SEYMOUR KORKES (1953), M.D.
Associate Professor of Biochemistry 3200 Guess Road
- CLARENCE FERDINAND KORSTIAN (1930), Ph.D.
Professor of Silviculture 4 Sylvan Road
- BARNET KOTTLER (1953), Ph.D.
Instructor in English 521 East Club Boulevard

* Resigned, August 31, 1953.

† Spring semester, 1953-54.

‡ Absent on leave, September 1, 1953, to September 1, 1954.

§ Absent on leave, 1953-54.

- PAUL JACKSON KRAMER (1931), Ph.D.
Professor of Botany 2251 Cranford Road
- ROBERT KRAMER (1947), LL.B.
Professor of Law 108 Pinecrest Road
- EDWARD K. KRAYBILL (1939), M.S.E.
Assistant Professor of Electrical Engineering 900 Dacian Avenue
- WILLIAM R. KRIGBAUM (1952), Ph.D.
Assistant Professor of Chemistry 863 Louise Circle, Poplar Apartments
- SOPHIA LOUISE KROK (1953), R.N., M.S.
Instructor in Medical Nursing Apartment C, 2209 Elder Street
- ROBERT JOSEPH KUBISZEWSKI (1952), B.N.S., Lieutenant, U. S. Navy
Assistant Professor of Naval Science 814 Green Street
- GEORGE FREDERICK KUDER (1948), Ph.D.
Professor of Psychology 2516 Perkins Road
- EDWARD CHARLES KUNKLE (1948), M.D.
Associate Professor of Medicine in Charge of Neurology 2525 Perkins Road
- *WESTON LABARRE (1946), Ph.D.
Associate Professor of Anthropology 1311 Alabama Avenue
- CREIGHTON LACY (1953), B.D., Ph.D.
Assistant Professor of Missions and Social Ethics 2990 Wa Wa Avenue
- CHARLES EARL LANDON (1926), Ph.D.
Associate Professor of Economics 1514 Edgevale Road
- WILLIAM GUERRANT LANE (1952), Ph.D.
Instructor in English 1019 Dacian Avenue
- JOHN TATE LANNING (1927), Ph.D.
Professor of History 3007 Surrey Road, Hope Valley
- JOHN E. LARSH, JR. (1943), Sc.D.
Associate in Parasitology Duke Hospital
- *ELVIN REMUS LATTY (1937), J.D., J. Sc.D.
Professor of Law 3620 Hathaway Road, Hope Valley
- DUNBAR LAWSON (1953), B.S., Lieutenant Commander, U. S. Navy
Assistant Professor of Naval Science 1012 Arnette Avenue
- BENJAMIN FRANKLIN LEMERT (1930), Ph.D.
Associate Professor of Economics 123 Pinecrest Road
- HAROLD WALTER LEWIS (1949), Ph.D.
Assistant Professor of Physics 2307 Sprunt Street
- MARTHA MODENA LEWIS (1933), M.A.
Associate Professor of Physical Education 407 Erwin Apartments
- RALPH ELTON LEWIS (1941), M.S. in M.E.
Assistant Professor of General Engineering 1401 Alabama Avenue
- ROSALYN LIGHTSEY (1953), A.B., M.S.W.
Instructor in Social Service 912 Lambeth Circle, Poplar Apartments
- CHARLES HARRIS LIVENGOOD, JR. (1946), LL.B.
Professor of Law 2804 Chelsea Circle, Hope Valley
- GEORGE TOWNSEND LODGE (1953), Ph.D.
Associate Professor of Psychology 804 Third Street
- ARTHUR HILL LONDON, JR. (1932), M.D.
Associate in Pediatrics 306 South Gregson Street

* Absent on sabbatical leave, spring semester, 1953-54.

- *FREDERICK LONDON (1938), Ph.D., D. ès Sc.
James B. Duke Professor of Chemical Physics 1508 Oakland Avenue
- HANS LÖWENBACH (1940), M.D.
Professor of Psychiatry and Physiology Box 79, Route 3, Durham, N. C.
- CHARLES LUCIEN BAKER LOWNDES (1934), S.J.D.
James B. Duke Professor of Law 2016 Club Boulevard
- †AMANDA LUEDECKE (1952), R.N., B.S. in N.Ed.
Instructor in Psychiatric Nursing Duke Hospital
- OSKAR HELGE LUNDHOLM (1930), Ph.D.
Professor of Psychology 803 Second Street
- EMMETT S. LUPTON (1952), M.D.
Instructor in Dermatology and Syphilology 102 Taisley, Greensboro, N. C.
- GEORGE CUNINGGIM LYNCH (1953)
Instructor in Medical Art 1602 Albany Street
- JOSEPH HOWARD McALISTER (1953), M.D.
Associate in Radiology 2759½ Guess Road
- ANGUS M. MCBRYDE (1931), M.D.
Associate Professor of Pediatrics 410 East Forest Hills Boulevard
- JOHN MALCOLM MCBRYDE, JR. (1953), B.S.
*Administrative Assistant in Charge of the
 Duke Hospital Out-Patient Clinic* 1309 Washington Street
- JOHN P. MCBRYDE (1950), M.A., Lieutenant Colonel, U. S. Air Force
Associate Professor of Air Science 2524 State Street
- JOSEPH ADOLPHUS McCLAIN, JR. (1940), J.S.D., LL.D.
Professor of Law 2021 Myrtle Drive
- JOSEPH P. MCCrackEN (1946), M.D.
Instructor in Medicine 126 Pinecrest Road
- †FOREST DRAPER McCREA (1930), Ph.D.
Associate Professor of Physiology and Pharmacology 1023 Demerius Street
- MALCOM McDERMOTT (1930), LL.B.
Professor of Law Route 2, Linden Road
- GELOLO McHUGH (1946), Ph.D.
Assistant Professor of Psychology 1413 Watts Street
- LIONEL WILFRED McKENZIE, JR. (1948), B.Litt. (Oxon.), M.A.
Assistant Professor of Economics 15 Alastair Court, 300 Swift Avenue
- JONATHAN COLLINS McLENDON (1952), Ph.D.
Assistant Professor of Education 937 Lambeth Circle, Poplar Apartments
- LEWIS J. McNURLEN (1952), M.A.
Instructor in Sociology 1818 Glendale Avenue
- §SAMUEL D. McPHERSON, JR. (1949), M.D.
Associate in Ophthalmology 1520 Hermitage Court
- IAN O. MACCONOCHIE (1953), B.S. in M.E.
Instructor in Mechanical Engineering 1400 Alabama Avenue
- DOUGLAS BLOUNT MAGGS (1930), J.D., S.J.D.
Professor of Law 3940 Dover Road, Hope Valley
- **JOHN McCLELLAN MAJOR (1953), M.A.
Visiting Instructor in English Department of English, Duke University

* Died, March 30, 1954.

† Resigned, July 31, 1953.

‡ Absent on leave, September 1, 1953, to January 1, 1954; resigned, January 1, 1954.

§ Absent on leave, 1953-54.

** Spring semester, 1953-54.

- ALAN KREBS MANCHESTER (1929), Ph.D.
Professor of History 2016 Myrtle Drive
- PAUL FRANKLIN MANESS (1949), M.D.
Instructor in Pediatrics 305 North Front Street, Burlington, N. C.
- JETHRO OATES MANLY (1952), B.S.
Instructor in Botany 907 Lambeth Circle, Poplar Apartments
- EVERETT JAMES MANN (1950), M.B.A., C.P.A.
Associate Professor of Accounting 1712 Roxboro Road
- GEORGE MARGOLIS (1947), M.D.
Associate Professor of Pathology 2417 Perkins Road
- JOSEPH ELDRIDGE MARKEE (1943), Ph.D.
James B. Duke Professor of Anatomy 1015 Demerius Street
- SIDNEY DAVID MARKMAN (1947), Ph.D.
Associate Professor of Art History and Archaeology 919 Urban Avenue
- MRS. ELSIE W. MARTIN (1930), M.S.
Professor of Dietetics 206 Faculty Apartments
- MRS. RUTH CAMPBELL MARTIN (1944), M.D.
Associate Professor of Anesthesiology and Assistant Anesthetist 113 Pinecrest Road
- SAMUEL PRESTON MARTIN (1949), M.D.
Associate Professor of Medicine and Assistant Professor of Bacteriology 113 Pinecrest Road
- MRS. JAY DAVIS MASSEY (1952), B.S., M.A.
Instructor in Physical Education 1609 Dexter Street
- LUCY ETHELYN MASSEY (1949), R.N., M.A.
Assistant Professor of Public Health Nursing Dawson Road, Chapel Hill, N. C.
- FRANCIS WYNNE MASTERS (1952), M.D.
Associate in Plastic Surgery 2305 Elder Street
- WILLIAM CARY MAXWELL (1930), Ph.D.
Associate Professor of German 142 Pinecrest Road
- *OTTO MEIER, JR. (1934), M.S., E.E.
Associate Professor of Electrical Engineering 916 Monmouth Avenue
- ELIJAH EUGENE MENEFFEE, JR. (1940), M.D.
Associate Professor of Medicine 2205 Cranford Road
- MRS. ANN REID MERZBACHER (1952), A.B.
Instructor in Mathematics Box 801, Chapel Hill, N. C.
- M. VICTOR MICHALAK (1950), A.M.
Instructor in English 838 Louise Circle, Poplar Apartments
- OSCAR LEE MILLER (1946), M.D.
Lecturer in Orthopaedic Surgery Charlotte, N. C.
- FRANK KIRBY MITCHELL (1926), A.M.
Associate Professor of English 619 Swift Avenue
- †IRVING WARD MOHR (1952), D.D.S.
Instructor in Oral Surgery Duke Hospital
- ‡WILFRIED F. H. M. MOMMAERTS (1948), Ph.D.
Lecturer in Biochemistry 854 Louise Circle, Poplar Apartments
- ROBERT JOHN MONTFORT (1940), B.A.
Associate Professor of Physical Education 3300 Cole Mill Road

* Absent on leave, spring semester, 1953-54.

† Resigned, December 31, 1953.

‡ Resigned, June 30, 1953.

- EARL GEORGE MUELLER (1945), B.M., M.A., M.F.A.
Assistant Professor of Art 1212 Virginia Avenue
- MRS. JULIA WILKINSON MUELLER (1939-41; 1946), M.A.
Assistant Professor of Music 1212 Virginia Avenue
- WILLIAM MULDER (1953), M.A.
Visiting Instructor in English 1001 Lamond Avenue
- MARY FRANCES MULDROW (1952), Ph.D.
Instructor in Romance Languages 1507 West Pettigrew Street
- JOHN CRAWFORD MULLER (1953), M.D.
Instructor in Medicine Route 1, Box 5, Cornwallis Road
- ROBERT J. MURPHY, JR. (1950), M.D.
Associate in Pediatrics Chapel Hill, N. C.
- HIRAM EARL MYERS (1926), S.T.M., D.D.
Professor of Biblical Literature 141 Pinecrest Road
- JACK DUANE MYERS (1947), M.D.
Associate Professor of Medicine 713 Anderson Street
- JAMES B. MYERS (1952), A.B., Major, U. S. Air Force
Instructor in Air Science 214 Northwood Circle
- MRS. JESSICA H. LEWIS MYERS (1950), M.D.
Associate in Medicine 713 Anderson Street
- GEORGE W. NACE (1951), Ph.D.
Assistant Professor of Zoology 2402 Chapel Hill Road
- AUBREY WILLARD NAYLOR (1952), Ph.D.
Associate Professor of Botany 881 Louise Circle, Poplar Apartments
- *GLENN ROBERT NEGLEY (1946), Ph.D.
Professor of Philosophy 1700 Shawnee Street
- ERNEST WILLIAM NELSON (1926), Ph.D.
Associate Professor of History 939 Lambeth Circle, Poplar Apartments
- BARBARA CAROL NEWBORG (1952), M.D.
Instructor in Medicine 1503 Virginia Avenue
- HENRY WINSTON NEWSON (1948), Ph.D.
Professor of Physics 1111 North Gregson Street
- WILLIAM MCNEAL NICHOLSON (1935), M.D.
Professor of Medicine in Charge of Postgraduate Education, and Disease of Metabolism 824 Anderson Street
- WALTER MCKINLEY NIELSEN (1925), Ph.D.
James B. Duke Professor of Physics 139 Pinecrest Road
- LOTHAR WOLFGANG NORDHEIM (1937), Ph.D., Sc.D.
Professor of Physics 2255 Cranford Road
- WILLIAM K. NOWILL (1951), M.D.
Assistant Professor of Anesthesiology 2604 Glendale Avenue
- †JOHN M. OCKER (1951), B.S., Captain, U. S. Navy
Professor of Naval Science 2101 Myrtle Drive
- GUY LEARY ODOM (1943), M.D.
Professor of Neurosurgery 2812 Chelsea Circle, Hope Valley
- FRANK ROLAND OLSON (1953), M.A.
Instructor in Mathematics 907 Second Street
- JOHN BURWELL OLIVER (1952), A.M.
Instructor in History 104 Faculty Apartments

* Absent on sabbatical leave, 1953-54.

† Resigned, June 15, 1953.

- HENRY JOHN OOSTING (1932), Ph.D.
Professor of Botany 2642 University Drive
- EDWARD STEWART ORGIN (1934), M.D.
Professor of Medicine 3321 Devon Road, Hope Valley
- RODERICK B. ORMANDY (1953), M.A.
Assistant Professor of Medical Speech Pathology 2906 Erwin Road
- SUYDAM OSTERHOUT (1953), M.D.
Instructor in Bacteriology 03 Baker House
- *DEWEY A. OSTROM (1951), B.A., Lieutenant Commander, U. S. Navy
Assistant Professor of Naval Science and Tactics 2507 Shenandoah Avenue
- HARRY ASHTON OWEN (1951), B.E.E., M.S.E.
Assistant Professor of Electrical Engineering Hillandale Road
- AUBREY EDWIN PALMER (1944), B.S. in E., C.E.
Associate Professor of Civil Engineering 2519 State Street
- LEONARD PALUMBO (1950), M.D.
Visiting Lecturer in Obstetrics and Gynecology 1116 Ninth Street
- †HAROLD TALBOT PARKER (1939), Ph.D.
Associate Professor of History 12 Glenn Apartments, Dacian Avenue
- JOSEPH B. PARKER, JR. (1953), M.D.
*Associate Professor of Psychiatry, and
 Chief of Psychiatry at Veterans Hospital* 2921 Horton Road
- ‡WILLIAM THOMAS PARROTT, JR. (1951), M.D.
Instructor in Medicine 109 East Gordon Street, Kinston, N. C.
- KARL BACHMAN PATTERSON (1920), A.M.
Assistant Professor of Mathematics 1024 Monmouth Avenue
- RANDOLPH E. PATTERSON (1953), B.S., Lieutenant (j.g.), U. S. Navy
Assistant Professor of Naval Science 2328 Farthing Street
- ROBERT LEET PATTERSON (1945), B.D., Ph.D.
Professor of Philosophy Washington Duke Hotel
- §LEWIS PATTON (1926), Ph.D.
Associate Professor of English 614 Swift Avenue
- WILLIAM BERNARD PEACH (1951), Ph.D.
Assistant Professor of Philosophy 2525 Chapel Hill Road
- RICHARD LEHMER PEARSE (1938), M.D.
Instructor in Obstetrics and Gynecology 1325 Arnette Avenue
- TALMADGE LEE PEELE (1939), M.D.
*Associate Professor of Anatomy, and
 Assistant Professor of Medicine* E2B University Apartments
- CHARLES HENRY PEETE, JR. (1953), M.D.
Associate in Obstetrics and Gynecology Duke Hospital
- MARION ISABEL PELTON (1953), A.B., M.S.
Instructor in Social Service 2113 Englewood Avenue
- KENNETH E. PENROD (1950), Ph.D.
*Associate Professor of Physiology and Pharmacology, and
 Assistant to the Dean of the School of Medicine* 1815 Hillcrest Drive
- EDMUND FRANKLIN PERRY (1950), Ph.D. 7 Alastair Apartments, 300 Swift Avenue
Assistant Professor of Undergraduate Religion

* Resigned, May 31, 1953.

† Absent on sabbatical leave, 1953-54.

‡ Resigned, September 30, 1953.

§ Absent on sabbatical leave, spring semester, 1953-54.

- HAROLD SANFORD PERRY (1932), Ph.D.
Associate Professor of Botany 2302 Cranford Road
- SOLOMON PAUL PERRY (1953), M.D.
Assistant Professor of Radiology 1212 Arnette Avenue
- ELBERT LAPSLEY PERSONS (1930), M.D.
Associate Professor of Medicine, and Associate Professor of Preventive Medicine and Public Health 723 Anderson Street
- WALTER SCOTT PERSONS (1930), A.B.
Assistant Professor of Physical Education 612 Swift Avenue
- ERNEST PESCHEL (1953), M.D.
Associate in Medicine 2306 Pershing Street
- *RAY C. PETRY (1937), Ph.D., LL.D.
Professor of Church History 128 Pinecrest Road
- CLINTON M. PETTY (1953), Ph.D.
Research Instructor in Mathematics J3A University Apartments
- OLAN LEE PETTY (1952), Ph.D.
Assistant Professor of Education 1618 North Duke Street
- JOHN BERNARD PFEIFFER, JR. (1949), M.D.
Assistant Professor of Medicine N3B University Apartments
- JAMES HENRY PHILLIPS (1946), Ph.D.
Associate Professor of Biblical Literature 2517 Perkins Road
- JANE PHILPOTT (1951), Ph.D.
Assistant Professor of Botany 804 Fourth Street
- MARSHALL IVEY PICKENS (1932), M.A.
Lecturer in Hospital Administration 2000 Beverly Drive, Charlotte, N. C.
- HENRY FLOYD PICKETT (1935), A.B.
Associate in Medical Art and Illustration, and Photographer 2506 Cornwallis Road
- KENNETH LEROY PICKRELL (1944), M.D.
Professor of Plastic Surgery 3 Sylvan Road
- ROBERT FRANCIS PIERRY (1953), B.S. in C.E.
Instructor in Civil Engineering Route 1, Cornwallis Road
- HILDA PERSONS POPE (1948), Ph.D.
Assistant Professor of Bacteriology 802 Louise Circle, Poplar Apartments
- †FRANCIS ROSS PORTER (1930), B.S.
Superintendent of the Hospital and Professor of Hospital Administration Hillsboro, N. C.
- DOROTHY OVERTON POST (1953), M.S. in S.W.
Instructor in Social Service 917 Green Street
- MARY ALVERTA POSTON (1930), A.M.
Associate in Bacteriology 512 Watts Street
- MARY POTEAT (1935), Ph.D.
Assistant Professor of English 103 Faculty Apartments
- BENJAMIN E. POWELL (1946), Ph.D.
Professor in the Faculty of Arts and Sciences 3609 Hathaway Road, Hope Valley
- CLIFFORD PORTER POWELL (1953), M.D.
Instructor in Medicine 2411 Pickett Road
- ‡LEON W. POWELL, JR. (1952), M.D.
Instructor in Pathology East Club Boulevard

* Absent on sabbatical leave, spring semester, 1953-54.

† Absent on leave, October 1, 1952, to October 1, 1954.

‡ Resigned, June 30, 1953.

- CHARLES E. PRALL (1949), Ph.D. 1001 Hill Street, Greensboro, N. C.
Visiting Lecturer in Hospital Administration
- LANIER WARD PRATT (1940), M.A. 2007 Ruffin Street
Instructor in Romance Languages
- RICHARD LIONEL PREDMORE (1950), D.M.L. 2413 Perkins Road
Professor of Romance Languages
- JAMES L. PRICE, JR. (1952), Ph.D. 915 Arnette Avenue
Assistant Professor of Undergraduate Religion
- WILLIAM WATKINS PRYOR (1953), M.D. 2419 State Street
Instructor in Medicine
- ALBERT ELSWORTH PUGH (1953), M.D. Staff Quarters, Veterans Hospital
Assistant Professor of Medicine and Chief, Professional Services, Veterans Hospital
- JAMES MINETREE PYNE (1949), B.S. 1832 Forest Road
Assistant Professor of Hospital Administration and Assistant Superintendent of the Hospital
- *DAVID RABIN (1953), B.S. in M.E., LL.B., LL.M. (PAT.) College of Engineering, Duke University
Instructor in Mechanical Engineering
- †GEORGE JUSTICE RACE (1951), M.D. 809 Louise Circle, Poplar Apartments
Associate in Pathology
- CHARLES WILLIAM RALSTON (1953), B.S., M.F., Ph.D. School of Forestry, Duke University
Assistant Professor of Forest Soils
- RICHARD BEVERLY RANEY (1934), M.D. 1110 Shepherd Street
Lecturer in Orthopaedic Surgery
- ROBERT STANLEY RANKIN (1927), Ph.D. 1107 Knox Street
Professor of Political Science
- WATSON SMITH RANKIN (1952), M.D., D.Sc. 2049 Briarwood Road, Charlotte, N. C.
Visiting Lecturer in Hospital Administration
- EDWARD SHORE RAPER (1934), A.B. 2317 Club Boulevard
Instructor in Hospital Administration
- JOSEPHINE RAPPAPORT (1952), R.N., M.A. Hanes House
Assistant Professor of Nursing Education
- CHARLES LEWIS RAST, JR. (1952), M.D. Route 1, Box 5, Cornwallis Road
Instructor in Medicine
- BENJAMIN ULYSSES RATCHFORD (1928), Ph.D. 133 Pinecrest Road
Professor of Economics
- BENJAMIN SMITH READ (1952), B.A., Major, U. S. Marine Corps 1023 Lakewood Avenue
Assistant Professor of Naval Science
- ISRAEL THOMAS REAMER (1931), Ph.G. 2406 West Club Boulevard
Associate in Pharmacy
- MRS. JEANETTE REARDON (1953), A.B., M.S.W. 320 Clark Street
Instructor in Social Service
- KENNETH JAMES REARDON (1947), A.M. 2610 Duke Homestead Road
Associate Professor of English
- PETER RECHNITZER (1953), M.D. Duke Hospital
Instructor in Medicine
- FREDERICK JEROME REED (1935), M.E., M.S. 2203 Englewood Avenue
Associate Professor of Mechanical Engineering

* Spring semester, 1953-54.

† Resigned, June 30, 1953.

- ROBERT JAMES REEVES (1930), M.D.
Professor of Radiology 920 Anderson Street
- EDWIN KELSEY REGEN (1951), B.D., D.D.
Visiting Lecturer in Practical Theology 1106 Watts Street
- HUGO MANLEY REICHARD (1951), Ph.D.
Instructor in English 2 Duke University Apartments
- *MRS. WALLY REICHENBERG-HACKETT (1946), Ph.D.
Assistant Professor of Psychology Route 1, Erwin Road
- FREDERICK P. RENKEN (1950), B. ARCH., MAJOR, U. S. Air Force
Assistant Professor of Air Science 2523 State Street
- THOMAS D. REYNOLDS (1953), Ph.D.
Assistant Professor of Education Apartment M4, 815 Demerius Street
- JOSEPH BANKS RHINE (1927), Ph.D.
Director of Parapsychology Laboratory Hillsboro, N. C.
- †BARBARA JANE RIEBEL (1951), M.S.
Instructor in Physical Education 806 West Club Boulevard
- HENRY STOUTTE ROBERTS, JR. (1948), Ph.D.
Associate Professor of Zoology Box 221, Route 5, Duke Homestead Road
- JOHN HENDERSON ROBERTS (1931), Ph.D.
Professor of Mathematics 2813 Legion Avenue
- WILLIAM M. ROBERTS (1950), M.D.
Lecturer in Orthopaedics Gastonia, N. C.
- ELIOT H. RODNICK (1949), Ph.D.
Professor of Psychology, and Director of Clinical Training in Psychology 2806 Legion Avenue
- E. STANFIELD ROGERS (1952), M.D.
Assistant Professor of Pathology 602 Ruby Street
- ROBERT SAMUEL ROGERS (1937), Ph.D., F.A.A.R.
Professor of Latin 148 Pinecrest Road
- ‡THEODORE ROPP (1938), Ph.D.
Associate Professor of History 302 Woodridge Drive
- JESSE LEE ROSE (1936), Ph.D.
Associate Professor of Latin and Greek East Campus
- NORMAN F. ROSS (1937), D.D.S.
Associate in Dentistry Chelsea Circle, Hope Valley
- ROBERT ALEXANDER ROSS (1930), M.D.
Visiting Lecturer in Obstetrics and Gynecology 818 Anderson Street
- DONALD FRANCIS ROY (1950), Ph.D.
Assistant Professor of Sociology 904 Shepherd Street
- MARVIN PIERCE RUCKER (1941), M.D., LL.D.
Lecturer in Obstetrics and Gynecology Richmond, Va.
- JOHN JESSE RUDIN, II (1945), Ph.D.
Associate Professor of Speech 1019 Rosehill Avenue
- MABEL F. RUDISILL (1948), Ph.D.
Associate Professor of Education 213 West Markham Avenue
- JULIAN MEADE RUFFIN (1930), M.D.
Professor of Medicine 816 Anderson Street

* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, January 31, 1954.

‡ Absent on sabbatical leave, fall semester, 1953-54.

RALPH WAYNE RUNDLES (1945), Ph.D., M.D. <i>Associate Professor of Medicine</i>	132 Pinecrest Road
REAMES HAWTHORNE SALES (1949), B.D., Ph.D. <i>Assistant Professor of Undergraduate Relegion</i>	2800 University Drive
MURIEL I. SANDEEN (1950), Ph.D. <i>Instructor in Zoology</i>	806 West Club Boulevard
CHARLES RICHARD SANDERS (1947), Ph.D. <i>Professor of English</i>	103 Pinecrest Road
MRS. EUGENIA CURTIS SAVILLE (1947), M.A. <i>Assistant Professor of Music</i>	1103 Anderson Street
LLOYD BLACKSTONE SAVILLE (1946), Ph.D. <i>Associate Professor of Economics</i>	1103 Anderson Street
JOHN HENRY SAYLOR (1928), Ph.D. <i>Professor of Chemistry</i>	707 West Club Boulevard
THOMAS ANTON SCHAFER (1950), B.D., Ph.D. <i>Assistant Professor of Historical Theology</i>	903 West Proctor Street
*CLARENCE HENRY SCHETTLER (1946), Ph.D. <i>Associate Professor of Sociology</i>	119 Pinecrest Road
HERMAN MAX SCHIEBEL (1939), M.D. <i>Associate in Surgery</i>	1020 Anderson Street
†KNUT SCHMIDT-NIELSEN (1952), Mag.Sc., Ph.D. <i>Professor of Zoology</i>	2402 Chapel Hill Road
PHYLISS JEAN SCHOCK (1953) <i>Technical Instructor in Clinical Microscopy</i>	912 Lambeth Circle, Poplar Apartments
FRANCIS XAVIER SCHUMACHER (1937), B.S. <i>Professor of Forestry</i>	6 Sylvan Road
RUDOLPH MATHIAS SCHUSTER (1953), Ph.D. <i>Research Associate and Visiting Assistant Professor of Botany</i>	1427 Broad Street
THEODORE B. SCHWARTZ (1948), M.D. <i>Assistant Professor of Medicine</i>	854 Louise Circle, Poplar Apartments
ESTHER LOUISE SCHWERMAN (1947), Ph.D. <i>Assistant Professor of English</i>	909 Lambeth Circle, Poplar Apartments
GEORGE WILLIAM SCHWERT, JR. (1946), Ph.D. <i>Associate Professor of Biochemistry</i>	611 Hammond Street
WILL CAMP SEALY (1946), M.D. <i>Associate Professor in Charge of Thoracic Surgery Division</i>	2232 Cranford Road
WALTER JAMES SEELEY (1925), E.E., M.S. <i>James B. Duke Professor of Electrical Engineering</i>	1005 Urban Avenue
JAMES HUSTEAD SEMANS (1953), M.D. <i>Associate Professor of Urology</i>	Bivins Street
DAVID GORDON SHARP (1939), Ph.D. <i>Associate Professor of Biophysics in Experimental Surgery, and Biophysicist to Duke Hospital</i>	202 Francis Street
LAMBERT ARMOUR SHEARS (1927), Ph.D. <i>Associate Professor of German</i>	917 Green Street
JOHN F. SHERRILL, JR. (1953), M.D. <i>Instructor in Radiology</i>	600 North Gregson Street

* Absent on sabbatical leave, fall semester, 1953-54.

† Absent on leave, 1953-54.

- *MILDRED MARGUERITE SHERWOOD (1930), R.N.
Associate in Pediatric Nursing Hanes House
- JOHN HERMAN SHIELDS (1926), A.M.
Associate Professor of Accounting 1315 Vickers Avenue
- MELVIN G. SHIMM (1953), LL.B.
Assistant Professor of Law 2902 Erwin Road
- WILLIAM WARNER SHINGLETON (1947), M.D.
Assistant Professor of Surgery 1510 Carolina Avenue
- †ELWOOD BRENT SHIRLING (1952), M.S.
Instructor in Botany 872 Louise Circle, Poplar Apartments
- JOSEPH ROBERT SHOENFIELD (1952), B.S.E., M.S., Ph.D.
Instructor in Mathematics 1003 East Trinity Avenue
- GEORGE ADDISON SILVER, III (1946), M.D.
Assistant Professor of Psychiatry 2005 Arbor Street
- ALBERT J. SILVERMAN (1953), M.D.
Instructor in Psychiatry Duke Hospital
- ‡EDWARD CHRISTIAN SIMMONS (1947), Ph.D.
Professor of Economics 2510 Perkins Road
- WILLIAM HAYS SIMPSON (1930), Ph.D.
Associate Professor of Political Science 1406 Dollar Avenue
- WILLIAM VANCE SINGLETARY (1948), M.D.
Instructor in Medicine 306 South Gregson Street
- MARY CLYDE SINGLETON (1950), B.S., R.P.T.T.
Associate in Physical Therapy 819 Louise Circle, Poplar Apartments
- BENJAMIN SMITH SKINNER (1946), M.D.
Instructor in Pediatrics 403 Jackson Street
- ALBERT G. SMITH (1951), M.D.
Associate in Pathology 826 Louise Circle, Poplar Apartments
- DAVID TILLERSON SMITH (1930), M.D., Litt.D.
Professor of Bacteriology, and Associate Professor of Medicine 3437 Dover Road, Hope Valley
- FRANK M. SMITH (1951), M.A., Captain, U. S. Air Force
Assistant Professor of Air Science 1425 Pennsylvania Avenue
- GROVER C. SMITH, JR. (1952), Ph.D.
Instructor in English 819 Knox Street
- HILRIE SHELTON SMITH (1931), Ph.D., D.D., Litt.D.
James B. Duke Professor of American Religious Thought 2721 Dogwood Road
- JOHN B. K. SMITH (1953), M.B., Ch.B., M.D.
Associate in Psychiatry Highland Hospital, Asheville, N. C.
- ROBERT SIDNEY SMITH (1932), Ph.D.
Professor of Economics 2236 Cranford Road
- MRS. SUSAN GOWER SMITH (1930), M.A.
Associate in Nutrition 3437 Dover Road, Hope Valley
- WILLIAM RODGER SMYTHE, JR. (1952), A.M.
Instructor in Mathematics 1115 West Chapel Hill Street
- §MARY HELEN SNIVELEY (1930), M.A., A.N.A.
Associate in Anesthesiology

* Absent on leave, 1953-54.

† Resigned, August 31, 1953.

‡ Absent on sabbatical leave, fall semester, 1943-54.

§ Resigned, August 31, 1953.

- *WILLIAM BREWSTER SNOW (1948), Sc.D.
Associate Professor of Civil Engineering 1022 West Trinity Avenue
- RAYMOND STEPHEN SORENSEN (1952), M.S. in P.E.
Instructor in Physical Education Piedmont Apartments
- JOSEPH JOHN SPENGLER (1934), Ph.D.
Professor of Economics 2240 Cranford Road
- HERTHA D. E. SPONER (1935), Ph.D.
Professor of Physics 3309 Avon Road, Hope Valley
- ANABEL STANFORD (1953), M.A.
Instructor in Social Service Duke Hospital
- DALE FISHER STANSBURY (1946), J.S.D.
Professor of Law 1008 West Trinity Avenue
- †HELEN STARKE (1948), M.D.
Instructor in Medicine Cole Mill Road
- EUGENE ANSON STEAD, JR. (1947), M.D.
Florence McAlister Professor of Medicine 2122 Myrtle Drive
- FRANK H. STELLING (1952), M.D.
Lecturer in Orthopaedic Surgery Shriners Hospital, Greenville, N. C.
- CHARLES RONALD STEPHEN (1950), M.D.C.M., D.A., R.C.P.&S.
Professor of Anesthesiology and Chief Anesthetist 1509 Carolina Avenue
- DAVID B. STEVENS (1951), LL.B., Captain, U. S. Air Force
Instructor in Air Science 2121 Sprunt Street
- HARRY R. STEVENS (1947), Ph.D.
Assistant Professor of History University Apartments
- WILLIAM FRANKLIN STINESPRING (1936), Ph.D.
Professor of Old Testament 1107 Watts Street
- FREDERICK WILLIAM STOCKER (1943), M.D.
Associate Professor of Ophthalmology 1124 Forest Hills Boulevard
- JEAN STEVENS STOCKTON (1953), B.S.
Instructor in Physical Education 601 Watts Street
- CARL HENRY STOLTENBERG (1951), Ph.D.
Assistant Professor of Forest Economics 942 Lambeth Circle, Poplar Apartments
- PAUL CLINTON STOTTEMEYER (1953), B.S. in C.E., M.S. in Hydraulic Engineering
Instructor in Civil Engineering 835 Louise Circle, Poplar Apartments
- ‡FLOYD STOVALL (1953), Ph.D.
Professor of English Chapel Hill, N. C.
- DONALD W. STRASBURG (1953), Ph.D.
Instructor in Zoology and Assistant to the Director of the
Duke University Marine Laboratory 857 Louise Circle, Poplar Apartments
- HOWARD AUSTIN STROBEL (1948), Ph.D.
Assistant Professor of Chemistry 1013 Dacian Avenue
- WIPPERT ARNOT STUMPF (1948), Ph.D.
Associate Professor of Education 127 Pinecrest Road
- CHARLES WOODROW STYRON (1946), M.D.
Associate in Medicine 204 East Park Drive, Raleigh, N. C.
- §HERBERT WILFRID SUGDEN (1929), Ph.D.
Assistant Professor of English H3C University Apartments

* Resigned, August 31, 1953.

† Resigned, January 31, 1958.

‡ Spring semester, 1952-53.

§ Absent on sabbatical leave, 1953-54.

- ROBERT BURKE SUITT (1940), M.D.
Assistant Professor of Psychiatry 215 Faculty Apartments
- *ELIZABETH READ SUNDERLAND (1939-42; 1943), Ph.D.
Associate Professor of Art 26 Alastair Court
- DOTTIE LOUISE SUTHERLAND (1953), R.N., B.S.
Instructor in Surgical Nursing University Apartments
- LOUIS EARL SWANSON (1949), A.B.
*Assistant Professor of Hospital Administration,
 and Assistant Supervisor of the Hospital* 2610 Shenandoah Avenue
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James B. Duke Professor of History 116 Pinecrest Road
- ‡ALLAN TAYLOR (1953), M.D.
Associate in Radiology Box 3603, Duke Hospital
- CHESTER R. TAYLOR (1951)
Technical Associate in Experimental Surgery 519 East Club Boulevard
- §HARVEY GRANT TAYLOR (1940), M.D.
*Associate Professor of Pediatrics and Bacteriology,
 and Assistant Dean of Medical School* Route 2, Hillsboro, N. C.
- HAYWOOD MAURICE TAYLOR (1930), Ph.D.
Associate Professor of Biochemistry, and Professor of Toxicology 2620 University Drive
- KENNETH JOHN THARP (1953), B.S. in C.E.
Instructor in Civil Engineering Apartment 03, 821 Demerius Street
- JOSEPH MILLER THOMAS (1930), Ph.D.
Professor of Mathematics 2215 Cranford Road
- WALTER LEE THOMAS, JR. (1932-35; 1937-42; 1945), M.D.
Associate Professor of Obstetrics and Gynecology 3615 Dover Road, Hope Valley
- EDGAR TRISTRAM THOMPSON (1935), Ph.D.
Professor of Sociology 138 Pinecrest Road
- ROBERT L. THURSTONE (1953), M.S. in E.E.
Instructor in Electrical Engineering 400 Laurel Hill Road, Chapel Hill N. C.
- KATHARINE TILLEY (1953), B.S. in N.Ed.
*Instructor in Psychiatric Nursing
 at Highland Hospital* Highland Hospital, Asheville, N. C.
- ELIAS TORRE (1951), M.A.
Assistant Professor of Romance Languages 1121 Anderson Street
- **MARTIN BICE TRAVIS, JR. (1949), Ph.D.
Assistant Professor of Political Science 1405 Watts Street
- JAMES R. TRIMBLE (1953), M.D.
Instructor in Medicine Apartment 3-C, 808 Green Street
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Associate Professor of Greek 2804 Erwin Road, Poplar Apartments
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Professor of English 912 Green Street
- MRS. VIOLET HORNER TURNER (1943), M.D.
Assistant Professor of Obstetrics and Gynecology 2106 Cole Road
- RICHARD LOVEJOY TUTHILL (1953), Ed.D.
Professor in the Faculty of Arts and Sciences 1014 Gloria Avenue

* Absent on leave, spring semester, 1953-54.

† Died, March 2, 1954.

‡ Resigned, January 19, 1954.

§ Resigned, December 31, 1953.

** Resigned, August 31, 1953.

- LUELLA JANE UHRHANE (1947), R.N., M.P.H.
Assistant Professor of Health Education 208 Faculty Apartments
- CHARLES ROWE VAIL (1939), M.S. (E.E.)
Associate Professor of Electrical Engineering 900 Dacian Avenue
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Instructor in Zoology 854 Louise Circle, Poplar Apartments
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Professor of German 2114 Myrtle Drive
- HERBERT VON BECKERATH (1953), Ph.D.
Professor of Economics and Political Science Chapel Hill, N. C.
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Professor of Chemistry 2319 Englewood Avenue
- ALBERT EDWARD WACKERMAN (1938), M.F.
Professor of Forest Utilization 3610 Dover Road, Hope Valley
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Instructor in Occupational Therapy 2723 Brown Avenue, Poplar Apartments
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Instructor in Economics 214 Swift Avenue
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*Associate Professor of Practical Theology,
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- LORING BAKER WALTON (1929), Lic. ès L., Ph.D.
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Instructor in Zoology 801 Third Street
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Professor of English 2429 Perkins Road
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 Medical Service, Veterans Administration* D3A University Apartments
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Instructor in Pediatrics 306 South Gregson Street
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Instructor in Pediatrics 317 West Trinity Avenue
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* Absent on sabbatical leave, spring semester, 1953-54.

† Resigned, August 31, 1953.

‡ Resigned, July 15, 1953.

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Assistant Professor of English 2306 Prince Street
- LEWIS ELBERT WETHINGTON (1951), Ph.D.
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Assistant Professor of Chemistry 2525 Glendale Avenue
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*Professor of Military Science and Tactics,
and Associate in Psychiatry* 1204 Ruffin Street
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Associate Professor of Civil Engineering 206 Swift Avenue
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Assistant Professor of English 808 Louise Circle, Poplar Apartments
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Assistant Professor of Physics 20 Meadowbrook Drive
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Assistant Professor of Naval Science Randolph Road
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Professor of Nursing Education 116 Faculty Apartments
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Instructor in Obstetrics 402 Buchanan
- ROBERT RENBERT WILSON (1925), Ph.D., LL.D.
Professor of Political Science 717 Anderson Street

* Absent on sabbatical leave, 1953-54.

† Resigned, August 31, 1953.

‡ Absent on leave, 1953-54.

§ Resigned, May 31, 1953.

- WILLIAM PRESTON WILSON (1950), M.D.
Associate in Psychiatry Hillandale Road
- MRS. ELIZABETH WINFREY (1953), A.B., M.S.S.
Instructor in Social Service L1D Glen Lennox, Chapel Hill, N. C.
- THOMAS G. WINNER (1948), Ph.D.
Assistant Professor of Russian Language and Literature 1813 Hillcrest Drive
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James B. Duke Professor of Botany 924 Urban Avenue
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Assistant Professor of Music 635 Cranford Avenue
- BARNES WOODHALL (1937-43; 1945), M.D.
Professor of Neurosurgery 4006 Dover Road, Hope Valley
- *ROBERT HILLIARD WOODY (1929), Ph.D.
Professor of History 2648 University Drive
- MRS. ELEANOR JANE HERRING WOOTEN (1950), M.D.
Instructor in Pediatrics 817 Hillsboro Street, Raleigh, N. C.
- DEWITT WRIGHT (1943), J.D.
*Associate in Hospital Administration, and
Assistant Superintendent of the Hospital* Route 2, Hillsboro, N. C.
- †WARREN GRICE YATES (1949), A.M.
Instructor in German 409 Carver Street
- ‡ELISABETH STELLE YEARRICK (1953), M.S.
Assistant Professor of Dietetic Instruction 305 Erwin Apartments
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Instructor in Social Service L21B Glen Lennox, Chapel Hill, N. C.
- DAVID A. YOUNG (1946), M.D.
Lecturer in Psychiatry Raleigh, N. C.
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Instructor in Physiology 314 Clark Street
- KARL EDWARD ZENER (1928), Ph.D.
Professor of Psychology Route 2, Sparger Road
- HALINA ZUKOWSKI (1950), R.N., B.S., M.L.
Assistant Professor of Psychiatric Nursing 706 Louise Circle, Poplar Apartments

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Chemistry and Research Associate 1606 North Duke Street
- FRANK O. BOWMAN, JR. (1952), B.S.
Geology Department of Geology
University of North Carolina, Chapel Hill, N. C.
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Romance Languages 814 Demerius Street
- H. LAWRENCE CLEVER (1952), Ph.D.
Chemistry and Research Associate 1912 House Avenue
- GEORGE ARTHUR DELHOMME, JR. (1950), M.A.
Latin 1503 Miami Boulevard

* Absent on sabbatical leave, fall semester, 1953-54.

† Absent on leave, 1953-54.

‡ Resigned, October 31, 1953

§ Spring semester, 1953-54.

- *MRS. DON E. DISMUKES (1953), A.M.
Romance Languages F2C University Apartments
- MURRAY SCOTT DOWNS (1953), M.A.
History Box 1086, Men's Graduate Center
- WILLIAM KEIRCE (1953), B.M.E., M.A.
English Box 1047, Men's Graduate Center
- †J. C. McPHERSON (1953), M.S.
Mathematics
- ISAAC NEWELL (1953), B.A.
English 604 Cleveland Street
- L. E. PADGETT, JR. (1953), A.B.
English Box 4403, Duke Station
- CLYDE H. ROBERTSON (1953), M.A., B.Phil.
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- WALTER G. SMITH (1953), B.S. in M.E.
Mechanical Engineering 2842 Chapel Hill Road
- WILLIAM K. STARS (1953), M.A.
Aesthetics, Art and Music 912 Flora Street
- EUGENE H. THOMPSON (1952), M.A.
Romance Languages 1417 Watts Street
- ELMUS ROGERS WICKER (1953), M.A., B.Phil. (Oxon.)
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- DONALD P. WYLIE (1952), M.B.A., J.D.
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- †JAMES R. BROWNING (1952), LL.B. Apartment Q-1, 818 Demerius Street
- ALTON J. KNIGHT (1938), LL.B. Fish Dam Road
- L. STACY WEAVER (1953) LL.B. 853 Louise Circle, Poplar Apartments
- JACK C. WOODALL (1951), LL.B. 1405 Vickers Avenue

* Fall semester, 1953-54.

† Spring semester, 1953-54.

‡ Resigned, August 31, 1953.

RELIGIOUS LIFE

- JAMES T. CLELAND, M.A., S.T.M., D.D., Th.D.
Preacher to the University 2117 Myrtle Drive
- BARNEY L. JONES, B.D.
Chaplain to the University and Director of Religious Life 804 Third Street
- ANN HUTCHESON, M.R.E.
Associate Director of Student Religious Life, Woman's College Faculty Apartments
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Associate Director of Student Religious Life, West Campus Duke University Apartments
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Chaplain to Lutheran Students Poplar Apartments
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Advisor to Lutheran Students Aycok House
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Chaplain to Methodist Students 1019 West Markham Avenue
- MAX WILLIAM WICKER, B.D.
Chaplain to Baptist Students Men's Graduate Center
- RUSSELL LESLIE DICKS, B.D., D.D., Litt.D.
Chaplain of Duke Hospital 2308 Prince Street

STUDENT HEALTH

- ELBERT LAPSLEY PERSONS, M.D.
Director of Student Health 723 Anderson Street
- CAROLINE E. HELMICK, M.D.
Director of Student Health, Woman's College East Campus Infirmary
- MOZELLE VESTAL, R.N.
Resident Nurse, Woman's College East Campus Infirmary
- MRS. BARBARA ALLEN FAWCETT, R.N.
Nurse, Woman's College 324 Monmouth Avenue
- MRS. OLLIE PHILLIPS BURNETT, R.N.
Head Nurse, West Campus 1404 Arnette Avenue
- MRS. MARY EVA SCHOFIELD, R.N.
Nurse, West Campus 307 North Gregson Street

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Director of Choral Music 2401 Cranford Road
- MRS. JAMES FOSTER BARNES
Director of Woman's College Glee Club 2401 Cranford Road
- ALLAN HADLEY BONE, M.M.
Conductor of the Chamber and Symphony Orchestras 2314 Club Boulevard
- ANTON BREES
University Carillonneur Duke University

* Resigned, August 31, 1953.

† Resigned, October 31, 1953.

- PAUL ROBEY BRYAN, M.M.
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- MRS. MILDRED LITTLE HENDRIX, B.S.
University Organist 144 Pinecrest Road
- WILLIAM KLENZ, M.A.
Conductor of the Collegium Musicum 15 Alastair Court
- MRS. EUGENIA CURTIS SAVILLE, M.A.
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Art Curator 2114 Club Boulevard
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Record Librarian 2114 Club Boulevard
- *MARY HELEN STONE, A.B.
Art Curator 2114 Club Boulevard

Physical Education, Trinity College

- EDMUND McCULLOUGH CAMERON (1926), A.B.
Director of Physical Education and Athletics 2818 Chelsea Circle, Hope Valley
- JAMES ROBERT BLY (1949), M.S.
Assistant Professor of Physical Education; Coach of Soccer; Director, Intramural Athletics University Apartments
- HAROLD L. BRADLEY (1950), B.S.
Instructor in Physical Education; Coach of Basketball 1903 Washington Street
- HERSCHEL AMOS CALDWELL (1930)
Coach of Freshman Baseball, and Assistant Coach of Football 3100 Devon Road, Hope Valley
- ROBERT LEE CHAMBERS (1933), B.S. in Ed.
Coach of Varsity Track; Head Trainer 2311 Prince Street
- ROBERT CALVIN COX (1942), M.A.
Instructor in Physical Education; Assistant Coach of Football; Coach of Varsity Tennis 1826 Guess Road
- ANTHONY CHARLES DRAGO, B.S. in P.E.
Instructor in Physical Education; Assistant Coach of Basketball 1318 Gregson Street
- CARMEN M. FALCONE (1946), M.A.
Assistant Professor of Physical Education; Coach of Varsity Wrestling; Assistant in Football University Apartments
- ELLIS P. HAGLER (1936)
Coach of Varsity Golf; Assistant Coach of Football 220 Forest Wood Drive
- FRANCIS PARKS HARRISON (1947), M.A.
Assistant Professor of Physical Education; Assistant Coach of Wrestling 2511 Pickett Road
- †JOHN WILLIAM HENDRIX (1947), M.S.
Instructor in Physical Education; Coach of Varsity Tennis 1019 Oakland Avenue
- DAN WINFIELD HILL (1945), A.B.
Assistant Athletic Director 2527 Glendale Avenue
- HUBERT MURRY LEWIS (1937), B.S.
Business Manager of Athletics Pickett Road
- ROBERT JOHN MONTFORT (1940), B.A.
Assistant Professor of Physical Education; Assistant Trainer 3300 Cole Mill Road

* Resigned, June 30, 1953.

† Resigned, August 31, 1953.

WILLIAM D. MURRAY (1951), A.B. <i>Head Coach of Football</i>	2106 Myrtle Drive
THOMAS J. O'BOYLE (1951), B.E. in P.E. <i>Assistant Coach of Football</i>	233 Forest Wood Drive
CLARENCE MCKAY PARKER (1947) <i>Assistant Coach of Football, and Coach of Baseball</i>	Westover Park Apartments
WALTER SCOTT PERSONS (1930), A.B. <i>Assistant Professor of Physical Education; Coach of Swimming; Coach of Lacrosse</i>	612 Swift Avenue
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†KATHARINE HILL MIMS, A.M. <i>Counselor, Pegram House</i>	Pegram House
CONSTANCE F. PARVEY, A.B. <i>Counselor, Aycock House</i>	Aycock House
MARY ROWLAND ROBINSON, A.B. <i>Counselor, Jarvis House</i>	Jarvis House
MRS. HARRIET M. TAYLOR <i>Counselor, Giles House</i>	Giles House
†MARY MOSS WELLBORN, A. M. <i>Counselor, Jarvis House</i>	Jarvis House
MAXINE JOURDAN WESTPHAL, A.M. <i>Counselor, Bassett House</i>	Bassett House
MRS. FRANCES M. WHITAKER, A.M. <i>Assistant to the Dean of Undergraduate Women; Counselor, Brown House</i>	Brown House

RESIDENCE

‡MRS. MARY NORCOTT PEMBERTON <i>Hostess, West Campus</i>	West Campus Union
---	-------------------

* Died, June 1, 1953.

† Resigned, August 31, 1953.

‡ Retired, August 31, 1953.

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* Resigned, May 31, 1953.

† Resigned, September 30, 1953

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UNDERGRADUATE INSTRUCTION

TRINITY COLLEGE

THE WOMAN'S COLLEGE

THE COLLEGE OF ENGINEERING

The Undergraduate Colleges



The three colleges exist as parts of a university community in which the student has full opportunity to take part. They have a unique role in this community as the centers of individual education for undergraduates, but as members of the University the colleges share in the extensive facilities of laboratory and field work, superior physical equipment, great libraries, and able faculties which only a major university can provide. They share the same campuses with the Graduate School of Arts and Sciences, the Law School, the Medical and Nursing Schools, the Divinity School, the School of Forestry, and the Duke Hospital. A wide range of activities, religious, intellectual, cultural, social, and athletic, is open to the entire University community. At the same time there are other activities and organizations designed specifically for members of each undergraduate college. The student may thus enjoy both the activities and the atmosphere of a small college and the broader facilities and challenges provided by the existence of a university community.

Although the three colleges have separate identities, they are closely inter-related. Students of Trinity College and the College of Engineering live in the same dormitories, belong to the same fraternities, hold membership in the same student government association, attend classes in the same buildings. The College of Engineering provides for the specialized interests of its students by offering training in technical fields. At the same time it recognizes the importance of the study of the humanities because it realizes that the engineer has definite responsibilities as a citizen and that these responsibilities cannot be properly stressed in the purely technical curricula. Engineering students, therefore, participate in the academic and extra-curricular life of the liberal arts college as well as in the training and campus activities peculiar to their own college.

As a coordinate college within the University system the Woman's College shares the advantages of the wider community, and yet it offers to its students the special opportunities which belong to a separate woman's college. Women students receive training in leadership by administering their own organizations and by participating in community projects. At the same time they have the stimulus which comes from co-educational classes and from the experience of working with men of other colleges in campus activities.

Duke University is concerned with developing the whole man. In its classrooms, libraries, and laboratories it is concerned with his mental and moral development, in its gymnasiums and on its playing fields, with his physical growth, and in its Chapel and religious program, with his spiritual well being. Although it has always been closely associated with the Methodist Church, Duke welcomes students of all faiths and encourages them to develop their spiritual lives in accordance with the tenets of their own creeds. The need of training for specialized professions and employments is recognized, but such training is incidental to a larger purpose. Through the variety of the subject matter, the insistence on a common core of fundamental courses, and an emphasis on a more intensive study of some selected subject, the colleges seek to give their students a knowledge and appreciation of the culture of the Western World and at the same time to provide a foundation for careers in business and the professions.

Whether in the classroom or on the campus the emphasis is on the individual. To this end, classes are kept small in size and close contact between professor and student is encouraged. Instructors, counsellors, advisers, and administrative officers are interested in the student as a person. In turn the student is expected to accept the responsibility of contributing to his own development, to his college, and to his university. The relationship of mutual service between the individual student and his college is designed to develop men of intelligence, integrity, and culture. From this relationship there has grown through a century and more a sense of achievement and high competence that enables Duke men and women to make their place in the world as effective citizens whatever their careers may be.

Admission to the Colleges



CANDIDATES may qualify for admission as members of the freshman class or as students with advanced standing. Since the enrollment is limited, the Committee on Admissions selects students who, in its judgment, are best qualified to benefit from the educational advantages which the colleges offer. The Committee bases its decision on the academic record of the candidate, on test scores, and on satisfactory evidence of good character and general fitness for college life at Duke. A visit to the campus for a personal interview with an officer of the University is of material benefit to the candidate and the Committee.

ADMISSION TO THE FRESHMAN CLASS: A candidate for admission to the freshman class must present at least fifteen acceptable units of secondary school credit.

For admission to Trinity College and the Woman's College twelve of the fifteen units must be in English, foreign language, history* and social studies, mathematics, and science. They must include three units in English, one unit in algebra, and one unit in plane geometry. The three remaining units are elective and may be selected from those subjects for which the school allows credit toward graduation; but it is recommended that they also be selected from the five subject fields listed above.

For admission to the College of Engineering seven of the fifteen units must be in English (3 units), chemistry or physics (1 unit), algebra ($1\frac{1}{2}$ units), plane geometry (1 unit), and solid geometry† ($\frac{1}{2}$ unit). The remaining eight units are elective. At least five of them must be in English, foreign language, history and social studies, mathematics, and science. It is recommended that these five units be chosen from the following list:

English (in addition to the required 3 units).....	1 unit
Algebra (in addition to the required $1\frac{1}{2}$ units).....	$\frac{1}{2}$ to $1\frac{1}{2}$ units
Trigonometry	$\frac{1}{2}$ unit
Biology or chemistry or physics (in addition to the required unit) ..	1 to $\frac{3}{2}$ units
Foreign language	1 to 4 units
‡History and social studies.....	1 to 4 units

The three additional units needed to make the total of fifteen may be selected from those subjects for which the school allows credit

* Candidates who do not present two acceptable units of history must take history in college.

† Students may be admitted with a deficiency in solid geometry, but the deficiency must be removed before the beginning of the sophomore year.

‡ Engineering candidates who do not present at least one acceptable unit of history must take history in college.

toward graduation; but it is recommended that they also be chosen from the above list.

A graduate of an accredited secondary school who submits fifteen acceptable units of credit, who is recommended by his school principal, and who in all other respects meets the requirements of the Committee on Admissions may be admitted without examination. A candidate whose graduation is from a non-accredited school or about whom there may arise any other question as to qualification for admission may be required to take entrance examinations or such other tests as the Committee on Admissions may prescribe.

It is recommended that all candidates for admission to the freshman class take the Scholastic Aptitude Test of the College Entrance Examination Board or a similar program of tests administered on the Duke campus by the Duke University Bureau of Testing and Guidance. Details of the procedure to be followed in applying for either of these testing programs will be sent to each candidate for admission.

ADMISSION TO ADVANCED STANDING: A candidate for admission to advanced standing must have fulfilled the equivalent of the requirements for admission to the freshman class, must present official transcripts of all work completed in other institutions, and must have an honorable dismissal from each institution previously attended. Advanced standing candidates who have previously taken the Scholastic Aptitude Test of the College Entrance Examination Board should request the Board to send a report of their test scores to the Director of Admissions. All others are advised to take the Scholastic Aptitude Test or the program of tests administered by the Duke University Bureau of Testing and Guidance, as recommended for freshman candidates.

Credit for work completed at other institutions will be determined in relation to the curriculum requirements of the college in which the student enrolls at Duke.

A student who transfers with advanced standing to Trinity College or the Woman's College from a junior college or from a four-year college not affiliated with a regional accrediting association must continue, for at least one semester in Trinity College or in the Woman's College, the foreign language he or she presents for minimum graduation requirements. Credit for courses in science offered for advanced standing in any of the undergraduate colleges by a transfer from a junior college or a non-affiliated four-year college will be determined by the departments concerned.

Transfer credits are tentatively evaluated pending the completion of two semesters of work in residence. To validate provisional credits the student must earn at least an average of C in a normal load of work. Transfer credit, in which grades of C or above have been earned, is rated at one quality point per semester hour when validated. Courses

in which grades of less than C have been earned are not acceptable for transfer credit.

The maximum amount of credit acceptable from a junior college is 60 semester hours, exclusive of physical education. No credit is given for work completed by correspondence, and credit for no more than six semester hours is allowed for extension courses. Any extension work accepted must be specifically approved by the dean of the college to which the student seeks admission.

ADMISSION OF SPECIAL STUDENTS: Upon the approval of the dean, students of mature age may be admitted for special work in such courses of instruction as they are qualified to take. They may not be admitted as candidates for a degree in a regular course unless they meet all normal requirements for admission.

ADMISSION PROCEDURE: Application for admission to Trinity College and the College of Engineering should be made to the Director of Admissions, Trinity College and the College of Engineering, Duke Station, Durham, North Carolina. Application for admission to the Woman's College should be made to the Director of Admissions, Woman's College, College Station, Durham, North Carolina. Application forms and instructions will be sent to the candidate. It is the responsibility of the candidate to see that these forms are properly executed and, together with other requested material, sent promptly to the Director.

Application prior to the final year of the secondary school course is not required. Formal steps looking toward admission should be initiated, however, early in the senior year. Candidates for admission are requested to file all credentials by March 1. Candidates for admission to the Woman's College normally will receive notification of the decision of the Committee on Admissions between April 15 and May 1. Candidates for admission to Trinity College and the College of Engineering will be notified as decisions are made.

READMISSION OF FORMER STUDENTS: A student who, following withdrawal from college, desires to return should apply to the appropriate director of admissions. When applying for readmission the student should make a detailed statement of his or her activities since leaving Duke University.

Financial Information and Living Accommodations



FEES paid by the students cover only a part of the cost of their instruction and of the operations of the University. Income from endowment and contributions from the alumni, alumnae, and other public-spirited men and women meet the balance, which constitutes more than half the total cost.

Fees

A registration fee of \$20.00 is required of all new students. This fee is payable only once; it is not refundable. A room deposit of \$25.00 is also required of all new students. A tuition fee of \$175.00 and a general fee of \$75.00 are payable at the beginning of each semester. The general fee is in lieu of special fees usually charged for matriculation, use of laboratories, student health service, commencement, etc. Special fees for instruction in Applied Music are listed on page 110.

Due to rising costs a readjustment in charges, including room-rents, is being considered. In the event of an adjustment applicants will be notified.

An advance deposit of \$25.00 is required of all students in residence at the time of spring registration in order to reserve a place in classes for the fall semester. This is applied toward payment of the general fee at the opening of the fall semester. The deposit will be refunded to student whom the University does not permit to return. Students who of their own volition fail to return are not entitled to a refund.

An advance deposit of \$25.00 is also required of old students who have been out of school for one or more semesters and have been accepted for readmission. It is applied toward payment of the general fee for the semester of readmission. The advance deposit is paid at the time of notification of acceptance and is not refundable.

An Air Force ROTC deposit of \$20.00 is required of students enrolling in Air Science to cover possible loss of military equipment issued to them. This deposit is refunded to the student upon return of issued equipment.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and after the fifteenth day all fees are considered as earned and no refunds are made.

Students who register during the regular academic year for no more than two courses with a maximum credit of 8 semester hours are classified as special students. They are charged a registration fee of \$5.00 for each course, and \$12.00 for each semester hour of course credit. Students taking nine or more hours are charged full fees.

Auditors are permitted to attend classes provided they secure the consent of the instructor. They submit no daily work, take no examinations, and receive no credit. Students taking a full program and paying full fees may audit one or more courses without charge. Students not paying full fees are charged \$10.00 for each course each semester.

Students are entitled to one transcript free of charge. Additional copies are supplied at \$1.00 each. Records are not released when the Treasurer's Office reports an unpaid account.

Students may have their bills sent to parents or guardians provided the Treasurer has been notified in writing with sufficient antecedence. Failure of a student or of a parent or guardian to pay bills on the dates scheduled will debar the student from class attendance until his account is settled in full; subsequent withdrawal does not entitle him to a refund. No student is considered by the Faculty as a candidate for graduation until he has settled with the Treasurer for all his indebtedness to the University. A student who has not settled all his bills with the Treasurer is not allowed to stand the final examinations of the academic year.

Estimated Expenses for an Academic Year

Incidental expenses depend upon the tastes and habits of the individual, but the actual necessary expenses for an academic year are as follows:

	<i>Low</i>	<i>Moderate</i>	<i>Liberal</i>
Tuition	\$ 350.00	\$ 350.00	\$ 350.00
General Fee	150.00	150.00	150.00
Room Rent	100.00	125.00	200.00
Board	425.00	475.00	525.00
Laundry	30.00	40.00	50.00
Books	30.00	40.00	50.00
	<u>\$1,085.00</u>	<u>\$1,180.00</u>	<u>\$1,325.00</u>

The actual fees and expenses necessary for one year in residence as a student in Trinity College or the College of Engineering can be met with \$1,085.00.

Student Aid

Duke University is interested in students with ability and ambition. It is the aim of the University Scholarship Committee and others affiliated with the Student Aid Program to provide, insofar as possible,

the financial assistance required by worthy students. This assistance takes various forms. The actual cost to the University for each student is more than twice the amount received from the student. The deficit is paid out of contributions and income from endowment. Scholarships and prizes enable students with inadequate resources to reduce the amount payable to the University. Loans are made available, and through the Student Employment Offices part-time jobs are arranged. Through the Student Aid Program an earnest effort is made to eliminate the economic status of the student as a criterion for admission.

Scholarships

Scholarships intended to aid needy and deserving students have been established from time to time by persons deeply interested both in Duke University and in the members of its student body. Scholarship endowments are held in trust and are kept separate from other holdings of the University. All income is applied in accordance with the terms of the gift or bequest.

Scholarships are awarded annually by a committee of the Faculty appointed by the President of the University. In some cases donors have specified certain limitations and conditions, but in all cases final award is made by the University Scholarship Committee.

Candidates for competitive scholarship prizes should initiate applications during the fall semester of the senior year of study in secondary school. Instructions concerning the specific requirements and deadline dates will accompany the application materials sent to applicants for these awards.

Candidates for remissions of tuition and scholarship grants should submit applications by April 15 of the year prior to the academic year in which assistance is sought.

All applications for scholarship prizes, scholarship grants or remissions of tuition should be addressed to Mr. John M. Dozier, Executive Secretary Scholarship Committee, Duke University, Durham, North Carolina.

SCHOLARSHIP PRIZES: Certain scholarships are awarded annually to encourage as students young men and women who give outstanding promise of becoming leaders in their chosen fields of endeavor. Recipients of these awards are, in general, students whose superior intellect and excellence as scholars and leaders mark them as individuals who have the ability to influence and direct the course of affairs.

In considering applications for Scholarship Prizes, no weight is given by the Scholarship Committee to the financial situation of the candidate. The awards are based upon the proven merit of the individual rather than his need for financial assistance.

Eleven Angier Duke Regional Prizes of \$1,000.00 each are awarded annually to six men and three women who are residents of North Carolina and two men who are residents of South Carolina. Any resident of the State of North Carolina or male resident of South Carolina who meets the stated requirements is eligible to apply regardless of where he or she prepares for college.

Six Duke University Regional Scholarships of \$1,000.00 each are awarded annually to male residents of designated regions listed below. Any qualified resident of a designated region will be eligible to apply regardless of where he prepares for college.

Region I: The District of Columbia; Albemarle, Clarke, Culpeper, Fairfax, Fauquier, Frederick, Greene, Highland, King George, Loudoun, Madison, Orange, Page, Prince William, Rappahannock, Rockingham, Shenandoah, Spotsylvania, Stafford, Warren, Westmoreland counties and the city of Alexandria in Virginia; Montgomery and Prince Georges counties in Maryland.

Region II: The state of Virginia excluding those counties comprising a part of Region I.

Region III: The state of Florida.

Region IV: The state of Georgia.

Region V: The state of Tennessee.

Region VI: The state of West Virginia.

Three Duke University National Scholarships of \$1,000.00 each are awarded annually to women. Any qualified applicant for admission to the Woman's College of Duke University will be eligible to apply regardless of where she prepares for college.

Scholarship Prizes are awarded for one year and are renewable from year to year for a maximum duration of four years, on the condition that the holder maintain scholastic average in the upper quartile of his or her class and further that he or she show evidence of developing the qualities of leadership which served as the basis for the original award.

Candidates for Angier Duke Regional Prizes, Duke University Regional Scholarships, and Duke University National Scholarships must be eligible for admission to the freshman class of Trinity College, the College of Engineering, or the Woman's College in the ensuing academic year. A candidate must have attained scholastic standing in the highest twenty-five per cent of his or her class as of the closing date of his or her most recently completed semester at the time of application.

Fifteen honorary tuition scholarships are awarded annually to undergraduates in residence. Five are awarded to members of the sophomore class, five to members of the junior class, and five to mem-

bers of the senior class on the basis of the scholastic work of the preceding year.

REMISSIONS OF TUITION: Certain students attending Duke University are entitled to a remission of the tuition charge. Students in one of the privileged groups listed below are entitled to a maximum of eight semesters of free tuition at the undergraduate level. Each Summer Session in which work is taken and each semester spent in another institution will be counted as one of the eight allowable semesters. Only those students enrolled in the regular undergraduate program leading to a baccalaureate degree from Duke University are entitled to a remission of the tuition charge.

The purpose of the remission program is to assist the students in these categories to obtain a baccalaureate degree. It is assumed, therefore, that these students will make normal progress toward graduation. Failure to do so does not entitle a student to consideration for more than the allowable eight semesters.

All students entitled to a remission of tuition must apply to the Executive Secretary of the Scholarship Committee for this consideration. Students failing to receive remission for any part of their period of undergraduate study are not entitled to retroactive consideration.

GROUP I: All students preparing to enter full time religious work in a denomination maintaining a paid ministry are entitled to remission. Pre-Ministerial students are required to sign a note in the amount of their tuition at the beginning of each semester. The notes of all students from this group entering the ministry will be cancelled and returned to them. The notes of all students from this group failing to enter the ministry become due and payable with interest.

GROUP II: Children of ministers who are members of the North Carolina and Western North Carolina Conferences of the Methodist Church are entitled to remission as are the children of ministers of all faiths residing in Durham County, North Carolina. This consideration is given only to the children of resident members of the two North Carolina conferences who are giving their full time to religious work.

GROUP III: Remissions are given to the children, stepchildren, and adopted children of all staff members of Duke University in the following categories: (A) Staff members of the University listed in the catalog as "Officers of the University" who are employed on a full time basis. (B) "Officers Emeriti." (C) Any deceased staff member of the University listed in the catalog as an "Officer of the University" employed on a full time basis at the time of his or her death. (D) Deceased "Officers Emeriti."

ATHLETIC AWARDS: Duke University believes that a program of inter-collegiate athletics is a proper and desirable part of university life. Therefore, a limited number of Athletic Awards are available

for students participating in football and basketball. Only a part of the students on the team squads, however, hold awards. There are no athletic awards for participants in track, swimming, lacrosse, cross country, baseball, golf, tennis, soccer, wrestling, and gymnastics.

The Athletic Award covers only those items which are approved under the rules of the Atlantic Coast Conference and National Collegiate Athletic Association in which Duke University holds membership.

SCHOLARSHIP GRANTS: Although sufficient funds are not available to assist all applicants who present requests for aid, a substantial number of Scholarship Grants are made each year to able students who need financial assistance in order to meet the cost of attending college. Any candidate for admission, therefore, who considers himself or herself to be in such need is eligible to apply for a Scholarship Grant.

Applicants for Scholarship Grants will be required to submit a detailed statement of financial resources.

Scholarship funds available to undergraduates are listed in the *Bulletin of Undergraduate Instruction*.

Loans

A number of loan funds have been established for the benefit of the students of Duke University. The most important and largest is the Angier B. Duke Memorial Student Loan Fund, which is administered through an advisory committee of officers of the University. The amount available to be loaned depends upon the income from investments and on the amount repaid on loans previously made to students. The same committee of officers administers the other endowed loan funds of the University.

The committee in approving loans selects those students who, from the standpoint of character, scholastic attainment, personality and degree of financial need, are deserving of consideration.

The following regulations govern the operation of the loan fund program:

1. No loan will be made to a student who violates any of the regulations of the University or whose academic record is not satisfactory to the faculty.

2. As a general policy, a student must have spent one semester in residence before he is eligible to apply for a loan. During this period the loan committee will have an opportunity to acquaint itself with the worth and need of the individual applicants.

3. Loans will be made only to students who are taking approved courses of study that lead to a degree, and all loans must be arranged for not later than one week after the beginning of a semester.

4. Every applicant for a loan must give the names of two references who will be approached by the student Loan Office. Statements from these references must have been received and made a part of the file before any money will be advanced. Neither of these references may be a member of a borrower's family.

5. Long term loans are customarily made to defray only the expenses incurred for tuition, fees, or room rent.

6. Interest on long-term student loans accrues at the rate of 1% from the date of each note and is payable during or before the week prior to the graduation exercise of each of the school years during which the borrower is enrolled at Duke University. After the student leaves the University permanently, the interest rate rises to 3% for the five year period required for payment. Any notes unpaid at the end of this five year period will bear interest at the rate of 6% until they are paid in full.

An extension of two years at the 1% interest rate is granted to those borrowers receiving a degree of Doctor of Medicine at Duke University. This extension covers the two year internship required of all medical students. An extension at the 1% interest rate is also granted to those borrowers who continue their study in other institutions of higher learning. Proper proof of residence must be submitted annually to the Student Loan Office. Extensions of this sort will be renewed from year to year and the maximum period of extension will depend upon particular circumstance of each student.

7. Applications for loans should be made to the Loan Committee, Office of the Secretary, Duke University. A formal application for loan assistance may be made only on forms furnished in the Secretary's Office during the first week of each semester. The granting or withholding of a loan is a matter entirely within the discretion of the loan committee. A student is expected to use all other possible means of securing financial assistance before applying for aid from the Loan Fund.

Loan funds available to undergraduates are listed in the *Bulletin of Undergraduate Instruction*.

Student Employment

Student employment offices are maintained to serve students who need part-time jobs. There are many opportunities both on the campus and in the city of Durham, and a considerable number of students each year help defray their college expenses by working.

Students may make application for part-time employment only after they have completed an application for admission and notification of acceptance has been given. The job application should be by letter prior to the reporting date for entrance, and a detailed job

application form must be completed at the time of arrival at Duke University.

Those students in Trinity College and the College of Engineering in need of such employment may apply to Mr. J. M. Dozier, 217 Administration Building, West Campus. Students in the Woman's College should apply to the Assistant Dean of Undergraduate Women, 108 East Duke Building, East Campus.

Living Accommodations for Men

Craven, Crowell, Few and Kilgo Quadrangles on the West Campus are reserved for undergraduate men. The Quadrangles contain 33 Houses designated by letters of the alphabet from House A through House HH. The rooms are equipped as single and as double rooms. In some areas communicating doors between rooms provide suites for three or four persons. Kilgo Quadrangle is reserved for members of the Freshman Class.

Undergraduate men are required to live in the Residence Houses unless they are married, or are living with parents or relatives. Any exception must be approved by the Dean of Men.

The rental charge for a single room is \$175.00 for the academic year, or \$87.50 each semester. The rental charge for the double room is \$250.00 for the academic year, or \$125.00 for each occupant, or \$62.50 for each occupant each semester. Rooms are rented for no shorter period than one semester, or in case of a medical student, one quarter, unless by special arrangement with the Housing Bureau. A shorter period of occupancy without special arrangement will be charged a rate of \$1.00 per day with a minimum charge of \$25.00.

Room reservations are made with the Duke University Housing Bureau only after official acceptance for admission by the University. A \$25.00 room deposit is required from all Resident Hall applicants before reservation of room will be made. The initial room deposit is effective for the entire college course for the student whose attendance during regular terms is continuous. The room deposit will be refunded within thirty days after graduation upon the request of the student. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit is refundable provided the Housing Bureau is notified at least 60 days prior to the beginning of the semester for which the room is reserved. A resident student, in order to retain his room for the succeeding academic year, must make application at the office of the Housing Bureau for confirmation of the reservation in accordance with the plan that is published during the school year.

The exchange of rooms may be arranged at the Housing Bureau within fifteen days after the official opening of the semester or quarter

of the school term. Thereafter a charge of \$2.00 may be made. Persons exchanging rooms without the approval of the Housing Bureau will be subject to charges for both rooms.

The authorities of the University do not assume responsibility for the persons selected as roommates. Each student is urged to select the roommate when the room is reserved.

Beds and mattresses (39" x 74"), tables, chairs, dressers, mirrors, and window shades are furnished by the University. The student supplies linens, blankets and pillows. Rugs, if desired, are not to exceed 50 square feet in size.

Duke University desires to provide for its students a residential environment conducive to academic achievement, the development of high ideals, and sound character. The institution asks and believes that each student will contribute to this end by arranging his personal belongings in an orderly manner, by caring for the buildings and furniture as he would do in his own home, and by observing a code based on gentlemanly behavior in an educational environment which demands respect for all residents. Regulations governing the occupancy of rooms will be supplied directly from the Housing Bureau when the room reservations are made. Occupants are expected to abide by these regulations.

Living Accommodations for Women

Undergraduate women are required to live in Woman's College residence houses unless they are living with parents or close relatives in the City. Under special circumstances, in the case of a mature student, the Dean may make an exception.

A counselor, who is a member of the Dean's staff, lives in each dormitory. She serves as adviser to individual students and, in cooperation with the student House Council, is responsible for the administration of the house.

There are eight residence houses: Alspaugh, Aycock, Bassett, Brown, Giles, Jarvis, Pegram, and Southgate. All rooms in Jarvis and Southgate are double; in the other houses there are a few single rooms, and, with the exception of Aycock, a limited number of suites consisting of a double room and a single room.

Each occupant of a double room is charged \$150.00 for the school year or \$75.00 per semester; the occupant of a single room, \$200.00 for the school year or \$100.00 per semester. While rooms are rented for the full school year, unless special arrangements are made in advance with the Dean of Undergraduate Women, payment may be made by semester. A shorter period of occupancy than a semester without special arrangements will be charged at the rate of \$1.00 per day with a minimum charge of \$25.00.

Room reservations are made with the Woman's College Housing Bureau. An applicant who has been officially accepted may reserve a dormitory room by paying a room deposit fee of \$25.00. If this fee is not paid within ten days after she is notified of her acceptance, her admission is cancelled. The initial room deposit fee is effective for the entire college course of the student whose attendance during regular terms is continuous. It will be refunded within 30 days after her graduation. Upon the withdrawal of an enrolled student prior to graduation, or of an accepted applicant, the room deposit fee is refundable provided the Housing Bureau is notified at least sixty days prior to the beginning of the semester for which the room was reserved. Dormitory rooms are reserved by upperclass students in accordance with the plan that is published during the school year. All rooms which have not been reserved on or before the announced date will be considered vacant for the succeeding semester and will be assigned to others.

After a student has engaged a room, she is not permitted to move to another without the consent of the Woman's College Housing Bureau. A student leaving one room and occupying another without permission may be charged for both rooms for the entire semester. No student is allowed to rent or sublet her room to another occupant.

The Woman's College Housing Bureau selects a roommate for the new student who is assigned to a double room but has made no arrangements for a roommate. After a student has been in residence for one semester, however, she is responsible for obtaining and keeping a roommate if she continues to occupy a double room. If a student occupying a double room does not obtain a roommate within the time required—approximately two weeks after the beginning of the semester—she may be required to pay the rental consideration for the entire room.

Rooms are equipped with only the principal articles of furniture. The student provides her own linens, blankets, pillows, bedspreads, curtains, and lamps. She may supply additional articles such as scatter rugs and small tables or bookcases; but large rugs or overstuffed furniture, which make cleaning difficult, are prohibited.

Dining Service

The dining facilities on the West Campus include three cafeterias with multiple-choice menus, and the Oak Room where full meals and *a la carte* items are served. The cost for the academic year ranges from \$375.00 to \$500.00 depending on the tastes of the individual. On the East Campus dining halls are located in the Union and in Southgate. Resident women may not board elsewhere than at these

halls. The charge for board is \$200.00 per semester, payable at the time of registration.

In the Men's Graduate Center there is a cafeteria with multiple choice menus and a Coffee Lounge where sodas and sandwiches are served from 11:30 A.M. to 11:00 P.M. The prices in these dining rooms are the same as on the West Campus.

It is hoped that present rates may be maintained. Charges, however, are necessarily dependent on costs of labor, foods, and materials, and some adjustment may be necessary.

Due to the large number of those served in the dining halls, it is not possible to arrange special diets for individual students. Special diet for the sick is served in the infirmary.

The Libraries



THE UNIVERSITY LIBRARIES, with 1,125,450 volumes and 1,525,000 manuscripts, provide exceptional resources and facilities for study and research by undergraduate and graduate students, and by visiting scholars. Between 40,000 and 50,000 volumes are added annually, and 71 foreign and domestic newspapers and 3,923 periodicals are received currently. A large collection of microfilms of rare books, newspapers, and periodicals is available.

A Chemistry library (15,550 volumes), Physics-Mathematics library (16,100), and Biology-Forestry library (49,000) are housed for convenience of use in the buildings of these departments. The libraries of the Schools of Divinity (63,000), Law (101,300), Medicine (54,000) and of the College of Engineering (20,000), are also shelved in the buildings of these schools, all on the West Campus.

The General Library, centrally located on the West Campus, has 708,500 volumes in all other fields. It is the principal working and research collection for students in the humanities and social sciences. The collection has been developed with care to support the work of the undergraduate curriculum and the more specialized needs of graduate and post-doctoral research. Basic collections of source materials are supported by the important publications of criticism and discussion. There are large collections of general periodicals, of the publications of European Academies, and of public documents of state, federal, and foreign governments, and international organizations. The newspaper collection (about 13,000 volumes and 3,607 rolls of microfilm) is particularly strong in papers from the states of the Atlantic seaboard, both North and South, with extensive holdings of

Ante-bellum and Civil War papers of North Carolina, South Carolina, and Virginia.

The manuscript collections, relating chiefly to the South Atlantic region with particular strength in the Confederate period, is most extensive in the field of history, but it contains important source material on all phases of social and economic life as well as politics. There are groups of manuscripts in American and British literature, with a notable Walt Whitman collection, and a number of important mediaeval manuscripts, chiefly lectionaries and copies of the New Testament. Among many special collections of note are the Guido Mazzoni library of Italian and comparative literature, the Lanson Collection of French literature, Goethe and Dante collections, collections on Brazil, Peru, Ecuador, and the Philippines, the Holl Church history library, eighteenth-century English poetry and prose, a Socialist collection, the Arents tobacco collection, the Thomas collection of books on Chinese history and culture, the George Washington Flowers Collection of manuscripts, books, newspapers, and pamphlets dealing with all phases of Southern history, and the Trent collection of Walt Whitman books and manuscripts.

The General Library building, which was modernized and enlarged in 1949, contains many special features which contribute to the preservation of material and facilitate their use by students and research workers. The book stacks, manuscripts, and rare book storage and reading rooms are air-conditioned. Two hundred and fifty carrels, some completely enclosed, are available in the stacks as places of study for graduate students. Graduates and advanced students are permitted access to the stacks upon application. On the ground floor are a newspaper reading room with a battery of microfilm reading machines and a microphotography laboratory with facilities for reproducing printed and other material. On the same floor are the manuscripts reading room and storage area. The first floor has periodical, graduate, and undergraduate reading rooms, the latter opening into an attractively furnished small library for recreational reading. In the north wing is the rare book reading room, with adjoining special collections rooms and storage stacks. The second floor houses the general reference and reading room, the circulation department and Main Loan Desk, and the Public Card Catalog, a union catalog of books in all the University libraries. There is also a catalog of the library of the University of North Carolina at Chapel Hill, whose books are available through inter-library loan.

On the East Campus, the Woman's College Library, in its attractive Georgian building, contains 98,000 volumes in an open stack collection, chiefly those most constantly needed in the undergraduate work of women students. A reference and general reading room, the Thomas Memorial Room, and the Booklovers' Room, with open shelves of

books for general reading, provide comfortable and attractive space for reading and study.

A "Student's Guide to the General Library" is available on request addressed to the Librarian of the University.

Reserve Officers Training Corps



THROUGH the Naval and Air Force Reserve Officers Training program the University is cooperating with the Department of Defense in the effort to provide a steady supply of well-educated officers for the active and reserve forces of the Nation.

The Bureau of Testing and Guidance



THE UNIVERSITY maintains a Bureau of Testing and Guidance which provides a centralized program of educational, vocational, and personal counseling for students. In addition, the Bureau administers special group testing programs for University schools and departments and serves as the local testing center for a wide variety of national testing programs. The Bureau also carries on programs of research in the field of measurement and counseling. Although the counseling, testing, and research services of the Bureau are designed primarily to meet the needs of the students, the faculty, and the staff of Duke University, these services are made available to individuals and organizations outside the University as its facilities permit. Requests for further information should be addressed to the Director, Bureau of Testing and Guidance, Duke Station, Durham, N. C.

Appointments Office



THE APPOINTMENTS OFFICE is a service agency designed to aid graduates in solving the problem of post-college employment. Its primary function is to serve as an intermediatry between students and prospective employers. It acquaints students with possibilities in business and professional fields; it assembles comprehensive records on

each registrant and makes these records available to appropriate representatives; and it arranges interviews with prospective employers. The data assembled for individual records include academic achievement, training, experience, extracurricular activities, and honors. On occasion additional information of a specialized nature is secured. Confidential letters of recommendation are incorporated in the file of each registrant. The Office initiates contacts for students or cooperates with students who make contacts through personal efforts or through various departments of the University. It aids the registrant in directing his search to a field appropriate to his aptitude, training, and interest.

There are two major divisions of the Office: the Commercial Division, which handles all matters involving contacts with business and professional areas not related to formal education; and the Educational Division, which concerns itself with teaching and school administration positions at all levels. Students and alumni may register with either or both of these divisions.

The Office receives more calls for qualified personnel than it can supply from its registrants. It is to the mutual advantage of the students and the Office that a complete record of registrants be assembled by the fall of the senior year.

The Summer Session



THE SUMMER SESSION at Duke University makes available to Duke undergraduate students and to undergraduates from other universities and colleges a notable program of instruction in many fields of knowledge both academic and professional.

Undergraduates in Duke University who desire to accelerate their programs may complete the work for a degree in three years by attending two and one-half summer sessions.

Undergraduates from other colleges and universities may enjoy the special advantages of summer instruction at Duke and transfer their earned credits to their own institutions.

The Summer Session of 1954, will include two six-week terms: Term I, June 9 to July 17; Term II, July 20 to August 27. By attending both terms it is possible for a student to earn as many as twelve semester hours of credit.

Instruction of interest to undergraduates will be offered in the summer of 1954 in the following departments and colleges: Aesthetics, Art, and Music; Botany; Chemistry; Economics; Education; Nursing

Education; English; Forestry; French; Geology; German; Greek; Health and Physical Education; History; Latin and Roman Studies; Mathematics; Philosophy; Physics; Political Science; Psychology; Religion; Sociology; Spanish; and Zoology.

Distinctive features of Summer Session instruction are provided by the program in marine biology offered at the Duke Marine Laboratory, Beaufort, N. C., and by the School of Spanish Studies held on West Campus. The School of Spanish Studies (1954 will be its thirteenth session) offers unusual opportunities to students both undergraduate and graduate who seek proficiency in the active use of the language. Students and faculty live and board in the Residence and share in a Hispanic social program. Among the faculty are native professors and native student assistants. Everyone speaks Spanish. Courses are offered concurrently on the undergraduate and the senior-graduate level so that the student while acquiring oral facility in everyday living may also satisfy course requirements toward a degree.

While the basic purpose of the Summer Session is to serve the academic and the professional requirements of those who are interested in their own educational advancement, the University recognizes the need of, and provides for, a varied recreation program both athletic and social.

Undergraduates of Duke University both men and women who plan to attend the Summer Session should enroll with the Dean of their own college in Duke University. Undergraduates in other universities or colleges who seek transfer credits should apply directly to the Director of the Summer Session, Duke University, Durham, N. C.

Registration and Academic Regulations



ORIENTATION PROGRAM: All freshmen and transfer students are required to participate in the Activities of Orientation Week. The program includes general ability, achievement, and placement tests, orientation lectures, physical examinations, social events, special religious services, registration, and enrollment.

The University considers the planning of a course of study to be of primary importance. Perhaps the most significant moments of Orientation Week, therefore, are those which a new student spends with his faculty adviser. With the results of the several tests which all freshmen take available to them, the adviser and the student plan a course of study adapted to the ability, achievements, and goals of the individual student. New students who miss the whole or a part of the Orientation Program place themselves at a serious disadvantage at the very outset of their college career.

MATRICULATION AND REGISTRATION: Students in residence are required to submit to the appropriate dean, not later than the date of the spring registration, cards showing their selection of courses for the following year. An advance deposit of \$25.00 is required before the card may be submitted. These cards, approved by the dean, are filed for permanent record in the dean's office. Students who do not select their courses for the following year at the time appointed must pay a fee of \$5.00 to the Treasurer of the University before their course cards may be approved for the fall. Students whose course cards have been approved in the spring may matriculate by mail during the summer. The same regulations, with the exception of the advance deposit, apply to registration for the spring semester.

Students who register in either semester at a date later than that prescribed in the calendar of this Bulletin must pay to the Treasurer a fee of \$5.00. They are counted as absent in the work they have missed in the courses to which they are admitted, and these absences carry the same penalty as do other absences from the course. Changes in courses for reasons not arising within the University require a payment of \$1.00 for each change made. No course may be elected later than two weeks after the opening of the semester, and no student may be admitted to any class without an enrollment card.

General Academic Regulations

QUANTITY CREDIT AND COURSE LOAD: The term of credit used is the semester hour which signifies one recitation a week throughout the semester. Two or three hours of laboratory work are equivalent to one hour of class work. Two semesters of seventeen weeks each constitute the academic year. For the degree of Bachelor of Arts or Bachelor of Science, credit for 124 semester hours is required; for a degree in Engineering, 148 semester hours.

The normal load of an undergraduate student in the Colleges of Arts and Sciences is five academic courses totaling 14 to 17 semester hours. The maximum number permitted is 19 semester hours, exclusive of physical education. In the College of Engineering the normal load is 18 semester hours exclusive of physical education. No student is permitted to take less than 14 semester hours of work without special permission from the dean or to take more than the normal load of work unless his average grade in the preceding semester is higher than C.

QUALITY CREDIT: The requirements for the degree are computed not only in semester hours but also in quality points. Quality points are earned by a student on the basis of his grades: for an A he receives three quality points for each semester hour; for a B, two quality points for each semester hour; for a C, one quality point for each semester hour; for a D, no quality points; for an F, a loss of one quality point for each semester hour. (In the College of Engineering no loss is incurred by a grade of F.) Credit for at least 124 quality points is required for the degree of Bachelor of Arts or Bachelor of Science, and at least 148 quality points for a degree in Engineering.

CLASS STANDING: In the Colleges of Arts and Sciences a student to rank as a sophomore must have to his credit at least 26 semester hours and 26 quality points; as a junior, at least 56 semester hours and 56 quality points; and as a senior, at least 92 semester hours and 92 quality points. In the College of Engineering he must have, respectively, at least 30 semester hours and 30 quality points; 68 semester hours and 68 quality points; and 106 semester hours and 106 quality points.

In the Colleges of Arts and Sciences a senior may not take for graduation credit any course open primarily to freshmen; and a junior may take for graduation credit no more than one course open primarily to freshmen. A list of these courses is published in the *Bulletin* under "Courses of Instruction."

A student of the senior class, irrespective of his average grade in preceding years, must, in order to be eligible for graduation, complete the work of his senior year with a minimum average grade of C. A senior who lacks not more than 9 hours at the beginning of the last

semester of his senior year may, with the approval of the Dean of the Graduate School, register for a maximum of 6 semester hours of graduate credit.

A tentative list of all candidates for the Bachelor's degree is prepared under the supervision of the dean as early in the college year as possible. A copy is furnished to each department of instruction for information and reference, and a copy is posted on the official bulletin board of the University for the information of the students concerned.

RESIDENCE REQUIREMENTS: A minimum of 30 semester hours of senior-level work in the Colleges of Arts and Sciences and 36 in the College of Engineering must be earned in residence. Students who meet this requirement but who still lack 6 to 8 semester hours in final fulfillment of requirements may take this work in another institution of approved standing, provided the course is approved by the head of the department concerned and by the dean.

A student who completes in a summer session the work required by the University for the Bachelor's degree will be granted the degree at the end of the summer.

GRADING ATTENDANCE, REPORTS, DISMISSAL, AND EXAMINATIONS:

GRADING: Grades are reported so as to indicate one of four things:

(1) *Passed.* A, B, C, and D are all passing grades. The letters are intended to indicate the following quality of work: A, exceptional; B, superior; C, medium; D, inferior.

(2) *Failed.* A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class.

(3) *Incomplete.* (a) A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. (b) Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

(4) *Absent from final examination.* (a) The grade X indicates that the student was absent from the regularly scheduled examination. (b) A student absent from examination, if the absence has been excused by the dean of the college, may receive an examination upon the payment of a fee of \$3.00 to the Treasurer of the University. The instructor concerned arranges for the examination in cases where absences are excused. (c) A student with an X grade who has not obtained a passing grade before the end of the semester following that in which the X was incurred is regarded as having failed in the course concerned and must repeat the work in class in order to receive credit. (d) If a student's absence from an examination is not excused by the

dean of the college, his grade for the course concerned is recorded as F.

If a student drops a course without permission from the dean, the grade for that course is recorded as F. If he drops with permission a course in which he is failing, the grade for that course is recorded as F unless, in the judgment of the dean, circumstances do not justify this penalty.

ATTENDANCE: Regular and punctual attendance in class work is expected of all students. Weekly reports of all absences from classes are made by each instructor and filed in the dean's office. No instructor has the authority to excuse a student from class attendance; it is his duty to report all absences and tardies. The first three tardies in a given course are counted as one absence. Thereafter, each additional tardy is counted as one additional absence.

One unexcused absence per semester hour without penalty is allowed for personal obligations. Sophomores, juniors, and seniors who in a normal schedule make averages of B or above in the preceding semester will be allowed two absences per semester hour for personal obligations, but will in all other respects be subject to the same regulations as other students.

Absences due to illness when certified by a proper medical official will be excused. Absences due to authorized representation of the University may be excused. Officials in charge of groups representing the University are required to submit names of those persons to be excused to the appropriate dean's office forty-eight hours in advance of the hour when their absences are to commence. Absences due to individual and personal reasons will not be excused.

All absences immediately before and after announced holidays are counted as double absences. Such double absences commence at the hour the student leaves the campus before the holiday and are counted as double until the student arrives at his first class after the holiday. Absences at the beginning of each semester are also counted as double. Unexcused, consecutive absences, whether excessive or not, result in the loss of quality points as in the case of unexcused, excessive absences. Each excessive or consecutive absence results in the loss of quality points as follows: one quality point for the first absence, two additional for the second, and three additional for the third. When the third unexcused, excessive or consecutive absence occurs, the student is debarred from the course with a loss of six quality points and an F in the course. When the student has taken twelve absences, excused and unexcused, in any course he is required to drop the course unless the instructor and the dean concerned grant special permission for him to continue in the course.

When a student's course load is reduced, due to excessive absences, to less than 12 semester hours, he is required to withdraw from the University.

REPORTS: Reports on class attendance and proficiency in academic work are sent to parents or guardians after the examinations at the end of each semester. In addition, reports on freshmen are mailed at each mid-semester period.

DISMISSAL: A student of the freshman class to remain in the University must pass at least 6 semester hours of work in his first semester and 18 semester hours in his first year. All other students must pass at least 9 semester hours each semester. The University may require a student whose record is considered unsatisfactory to withdraw, although he has met the minimum requirements set forth in this paragraph.

EXAMINATIONS: Final examinations are held in all subjects in January and May.

DEFICIENCIES IN COMPOSITION: The following regulations have been adopted by the Faculty:

1. Any student who must take English 1 and whose score in the English placement test indicates that he is not yet ready for English 1 must earn a passing grade in English L before being permitted to enter English 1.

2. In the fall of the junior year every student of Trinity College and of the Woman's College must take an examination in English usage. The regulation does not apply to students of the College of Engineering, which has special course requirements in English composition in addition to English 1-2. Students with irregular schedules resulting from acceleration or transfer to Duke after the fall of their junior year should take the examination in the fall of the year most nearly approximating the fifth semester. In any event, all students must take this examination; it is a requirement for graduation. If it is not taken in the junior year, it must be taken the succeeding fall, or at such other time as may be designated by the appropriate authorities of the University. Students who are proved deficient by this examination will be required to complete satisfactorily a special non-credit laboratory course in remedial English.

3. Whenever the work of a student in any course is unsatisfactory because of errors in English, the instructor may report the student to the dean, who will require him to enroll in remedial English until, in the opinion of the director of the Remedial Laboratory, the deficiency is removed.

4. All instructors are requested to advise their students each semester concerning this regulation.

Requirements for Degrees



DUKE UNIVERSITY offers, in Trinity College, the Woman's College, and the College of Engineering, courses of study which lead to the degrees of: Bachelor of Arts; Bachelor of Science; Bachelor of Science in Civil, Electrical, or Mechanical Engineering; and Bachelor of Science in Nursing Education.

Bachelor of Arts

The requirements for the degree of Bachelor of Arts are based on the principle that the student will derive the maximum benefit from his college work if his program includes a broad distribution of studies among representative fields of culture, concentration within a special field, and some work of his own choice.

For graduation with the degree of Bachelor of Arts, the following course work must be completed in accordance with the academic regulations as stated in this Bulletin.

UNIFORM COURSE REQUIREMENTS	S.H.
English	6
Foreign Language	6-18
Natural Science	11
Religion	6
Social Science and History	12
Literature, Music, Art, and Philosophy	6
Physical Education	4
MAJOR AND RELATED WORK	42
ELECTIVES TO MAKE A TOTAL OF	124

These requirements are described in detail below. Descriptions of courses can be found under "Courses of Instruction, Trinity College and the Woman's College."

ENGLISH, 6 s.h.—This requirement is met by the completion of English 1-2. Students who demonstrate proficiency in English usage may be allowed to substitute 55 or 56 for English 1.

FOREIGN LANGUAGE, 6 to 18 s.h.—This requirement is met by the completion of the third college year of a foreign language. The languages which meet this requirement are French, German, Greek, Latin, and Spanish. The number of courses required depends on previous training and ability as shown on placement tests. Students presenting for entrance four units of Latin may satisfy the language requirement by the completion of the third college year of Latin or by two years of Greek. In exceptional cases, on the recommendation of the language department concerned and with the approval of the dean, a student who has completed the second college year of one language may satisfy the requirement by the completion of the first year of another language.

NATURAL SCIENCE, 11 s.h.—To satisfy this requirement a student must complete a laboratory course (8 s.h.) in one of the natural sciences (botany, chemistry, geology, physics, zoology), and one course of at least 3 semester hours selected from mathematics (except Mathematics 1), logic and scientific methodology (Philosophy 48 and 104), or from the sciences listed above.

RELIGION, 6 s.h.—To meet this requirement 6 semester hours must be chosen from Religion 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

SOCIAL SCIENCE AND HISTORY, 12 s.h.—(a) Students who present for entrance two acceptable units of history can satisfy this requirement by 12 semester hours chosen from History 1-2, or 51-52; Economics 51-52; Education 84, 105; Political Science 11-12, or 61-62, or 63-64; Psychology 91 to be followed, if desired, by either Psychology 100 or 101; or Sociology 91-92. Six of the 12 semester hours must be taken in economics, history, political science, or sociology. (b) Students who do not present for entrance two acceptable units of history must take History 1-2, or 51-52, and 6 semester hours selected from the other social sciences named in (a).

LITERATURE, MUSIC, ART, AND PHILOSOPHY, 6 s.h.—This requirement can be satisfied by a total of 6 semester hours in courses in English or American literature, foreign literature courses numbered above 100, literature courses in translation, courses in aesthetics, art, music, and courses in Philosophy except 48, 103, 104, 109, 199.

PHYSICAL EDUCATION, 4 s.h.—In Trinity College physical education is required during each of the first two years and is normally completed by the end of the sophomore year; in the Woman's College it is required during the first three years and is normally completed by the end of the junior year.

MAJOR AND RELATED WORK, 42 s.h.—Prior to registration in the spring of his sophomore year, each student is required to choose his major field and confer with his departmental adviser on the requirements for major and related work.

The major work consists of 18 to 24 semester hours in one department above the introductory courses. Introductory courses may consist of two one-semester courses in all departments except the Departments of German, Latin, and Romance Languages where the introductory courses may consist of four one-semester courses. The choice of courses must be approved by the major department. The related work must be taken in at least two other departments and is selected subject to the approval of the major department and the dean; it may not include more than one course of 6 or 8 semester hours open primarily to freshmen. Courses satisfying the uniform course requirements may also be counted toward the requirements in major and related work. Information on specific departmental requirements for major and related work can be found at the end of the department offerings in the section "Courses of Instruction." Several programs of study designed as preparation for professions are given in the section below entitled "Choice of a Major Field."

The total amount of work that a student may take in any one department toward the Bachelor of Arts degree is limited to a maximum of 36 semester hours. In the Department of Aesthetics, Art, and Music, and the Department of Philosophy, the Department of English, the Department of Economics, Accounting and Business Administration, and the Department of Romance Languages, a total of 54 semester hours is permitted, provided a total of not more than 36 semester hours is taken in any one division of the department.

ELECTIVES.—In addition to the uniform courses required and the major and related work, other courses must be completed to make a total of at least 124 semester hours, including 4 semester hours of physical education.

Students whose courses of study permit may elect a maximum of 18 semester hours in engineering, forestry, or medical science. The courses elected in these subjects must be approved by the major department and the dean of the college.

CHOICE OF A MAJOR FIELD

The requirement of 42 semester hours distributed, as specified above, between a major field and related work is based primarily on

the belief that some advanced study in one subject, together with work in allied subjects, is a valuable part of a general education. The selection of a major field usually depends on a student's cultural or vocational interests.

GENERAL PROGRAM

The General Program is designed for the student whose primary interest is in one of the liberal arts subjects. The subjects in which major work is offered are: art, botany, chemistry, economics, education, English, French, geology, German, Greek, history, Latin, mathematics, music, philosophy, physics, political science, psychology, religion, sociology, Spanish, zoology.

SPECIALIZED PROGRAMS

The student who has chosen a vocation may wish to include specialized training in his program. The following programs of study in preparation for various professions or professional schools are outlined for the guidance of the student.

BUSINESS: The student who plans to enter business may elect, in addition to the uniform course requirements, the following courses to satisfy the requirements for the Bachelor of Arts degree.

- Freshman Year: Economics 11 (recommended but not required).
Mathematics 5 (recommended but not required).
- Sophomore Year: Economics 51-52, Economics 57-58
- Junior Year: Economics 105, Economics 138, Economics 143, Economics 168, Economics 181, and one course selected from the following: Economics 144, Economics 147, Economics 158, Economics 182.
- Senior Year: Economics 153, Economics 188, Economics 191, and one course selected from the Economics group numbered above 100.

ACCOUNTING: A student who plans to qualify to take the Certified Public Accountant's examination should elect the following courses of study:

- Freshman Year: Economics 57-58 (may be taken at this time with the permission of the department).
- Sophomore Year: Mathematics 5 and 16 (recommended but not required).
Economics 51-52, Economics 171-172.
- Junior Year: Economics 143, Economics 153, Economics 173-174, Economics 181, 182.
- Senior Year: Economics 144 or Economics 184, Economics 275-276, and two courses from the following: Economics 175-176, Economics 177, Economics 178, Economics 180.

A student who does not take Economics 57-58 in the Freshman Year must take the course in the Sophomore Year and must make the necessary adjustments in the sequence of subsequent accounting courses.

Students majoring in accounting are urged to familiarize themselves

with the educational requirements of the State in which they expect to practice.

RELIGIOUS WORK: A student who plans to enter the ministry or other religious work should have a broad liberal arts training. He may major in religion or any other subject. It is suggested that the student include in his program as many as possible of the following courses.

Freshman Year: Religion 1-2, History 1-2.

Sophomore Year: Religion (6 s.h.), Economics 51-52 or Political Science 61-62, English Literature (6 s.h.).

Junior Year: Religion (6 s.h.), Psychology 91, English 151-152.

Senior Year: Religion (6 s.h.), Sociology (6 s.h.), Philosophy (6 s.h.).

SOCIAL WORK: The student who plans to pursue professional studies in preparation for social work (such as family welfare, child welfare, public welfare, probation and parole, and similar forms of neighborhood and community work) should take his major work in sociology, with related work in other social sciences. The following courses should be included:

History 1-2, or 51-52

Economics 51-52.

Political Science 61-62.

Psychology 91.

Philosophy (6 s.h.).

Zoology is recommended for the required course in Natural Science. Electives should be chosen mainly from history, economics, political science, education, sociology, philosophy, psychology, or religion.

TEACHING: The program for students who intend to teach is designed to prepare for positions both in the elementary school and in the high school. All prospective teachers, regardless of the type of school in which they expect to teach, (a) must take a sequence of four basic courses in the Department of Education, namely, Education 84, 88, 103, and 118; (b) should read carefully the certification requirements of the state in which they plan to teach and should arrange their programs with their departmental adviser accordingly; and (c) should begin early the required sequence of courses in education, taking Education 84, preferably during the sophomore year and Education 88 during the junior year.

HIGH-SCHOOL TEACHING. Students may meet certification requirements by qualifying in one teaching subject, but they are strongly advised to choose their electives to meet requirements in two teaching subjects. In any case their programs must include courses in education and in other subjects sufficient to satisfy the certification requirements of the state in which they will teach. Courses in materials and methods should be taken during the junior year; and courses in observation and practice teaching may be taken *only* in the senior year.

ELEMENTARY SCHOOL TEACHING. Students preparing to teach in the elementary school must complete the following specific requirements: Education 101-102, 142, and 161, History 91-92, and Political Science 11-12, or 63, or 61-62, Economics 115, Economics 109, or 118, or 120, Music 151, Physical Education 102, and Health Education 112. Education 101-102 (which includes observation and practice teaching) should be reserved for the senior year.

PREPARATION FOR GRADUATE SCHOOL: The student who plans to enter a graduate school of arts and sciences for advanced study should consult an adviser in the field of the proposed advanced study concerning suitable preparation. Most graduate schools have definite requirements in foreign languages for all students. Candidates for the degree of Doctor of Philosophy are required to pass reading examinations, usually in German and French. In some cases other languages may be substituted. As soon as practicable, the student should ascertain the requirements of the particular graduate school he desires to enter.

PREPARATION FOR LAW SCHOOL: Students who plan to study law may select their major work in any field. The following courses are recommended:

Economics 51-52, 57-58.
 English 55-56.
 History 1-2 or 51-52, 105-106.
 Philosophy 48 and 91.
 Political Science 61-62.
 Sociology 91-92.

PREPARATION FOR MEDICAL OR DENTAL SCHOOL:

Students planning to enter a medical or dental school should plan their programs of study from the first semester so as to include those courses required by the Medical Schools of their choice. Foundation courses for the study of medicine usually include: Chemistry 1-2, 61, 151-152; English 55-56; Mathematics 5, 6; Physics 51-52; and Zoology 1-2, 53.

Special advisers are available for pre-medical and pre-dental students. The names of these advisers may be secured at the dean's office.

Bachelor of Science

For graduation with the degree of Bachelor of Science, the following course work must be completed in accordance with the academic regulations as stated in this Bulletin.

UNIFORM COURSE REQUIREMENTS	S.H.
English	6
French and German (second college year)	12-24
Mathematics	6
Natural Science	8

Economics, History, or Political Science	6
Religion	6
Restricted Elective	6
Physical Education	4
MAJOR AND RELATED WORK	48
ELECTIVES TO MAKE A TOTAL OF	124

These requirements are described below. Description of courses can be found under "Courses of Instruction, Trinity College and the Woman's College."

ENGLISH, 6 s.h.—This requirement is met by the completion of English 1 and 2. Students who demonstrate proficiency in English usage may be allowed to substitute English 55 or 56 for English 1.

FRENCH AND GERMAN.—Bachelor of Science candidates must normally complete at least the second college year, or equivalent as determined by examination, of both French and German. In special cases, with the permission of the major department and the dean, this requirement may be met by completing the third year of French or German.

MATHEMATICS, 6 s.h.—This requirement may be met by completion of Mathematics 5 and 6.

NATURAL SCIENCE, 8 s.h.—This requirement can be satisfied by courses in one of the natural sciences, namely, botany, chemistry, geology, physics, and zoology. The courses must include laboratory work, and may not be counted as part of the major or related work.

SOCIAL SCIENCE AND HISTORY, 6 s.h.—A student who does not present for entrance two acceptable units of history (exclusive of other social studies) must take a course in history; otherwise, he has his choice of economics, history, or political science.

RELIGION, 6 s.h.—To meet this requirement 6 semester hours must be chosen from Religion 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

RESTRICTED ELECTIVE, 6 s.h.—To meet this requirement 6 semester hours in addition to other uniform course requirements must be selected from aesthetics, art, economics, education, English, foreign language, history, music, philosophy, political science, religion, and sociology.

MAJOR AND RELATED WORK, 48 s.h.—Major and related work consists of 48 semester hours in the Natural Sciences. This work must be selected from the departments of botany, chemistry, geology, mathematics, physics, psychology, and zoology. The major work consists of not less than 24 semester hours in one department, the choice of courses being subject to the approval of the department. The major work does not include courses primarily open to freshmen. The related work is taken in at least two other departments and is selected subject to the approval of the major department. It may not include more than one course primarily open to freshmen. A minimum of 14 semester hours of related work is required, 8 hours of which must be in laboratory science. Further information concerning the requirements for the major and related work in the various departments will be found at the end of the department offerings in the section "Courses of Instruction."

ELECTIVES.—In addition to the above, the student must elect sufficient courses to complete, with an average grade of "C," the 124 semester hours necessary for graduation.

Students whose courses of study permit may elect a maximum of 18 semester hours in engineering, forestry, or medical science. The courses elected in these subjects must be approved by the major department and the dean of the college.

The total amount of work that a student may take in any one department toward the Bachelor of Science degree is limited to a maximum of 40 semester hours.

On or before the date announced for the spring registration, every sophomore in this group should select his major department in the Natural Sciences and arrange, under the guidance of an adviser in the major department, his program of studies for the following year. He should obtain the adviser's written approval of all courses selected in the division before submitting his program to the dean for final action. In like manner, each upperclassman will recheck the courses in his division of concentration each year with a representative of his major department.

Bachelor of Science in Civil, Electrical, or Mechanical Engineering

The studies for degrees in Engineering, designed for students who are preparing for civil, electrical, or mechanical engineering as a profession, lead to the following degrees: B.S. in C.E., B.S. in E.E., and B.S. in M.E. All curricula of the College of Engineering are fully accredited by the Engineers' Council for professional development.

GROUPS OF STUDIES FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL, ELECTRICAL, OR MECHANICAL ENGINEERING

See the *Bulletin of the College of Engineering* for courses substituted by Air ROTC and Naval ROTC students in the following curricula:

Uniform Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 5	College Algebra	3	Math 50	Analytic Geometry	3
Math 6	Trigonometry	3	Math 51	Calculus I	3
Chem 1	Chemistry	4	Chem 2	Chemistry	4
Engl 1	English	3	Engl 2	English	3
Hist E1	History	3	Hist E2	History	3
GE 1	Drawing	2	GE 2	Descriptive Geometry	2
	Physical Education	1		Physical Education	1
		19			19

GROUP ONE CIVIL ENGINEERING *Sophomore Year*

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	GE 107	Strength of Materials	3
CE 61	Surveying	4	CE 62	Surveying	4
	Physical Education	1		Physical Education	1
		19			19

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Engl E93	Advanced Composition . . .	3	Engl 151	Public Speaking	3
GE 58	Dynamics	3	GE 128	Hydraulics	3
CE 131	Structures	5	CE 132	Structures	5
CE 113	Route Surveying	3	CE 118	Materials	3
EE 123	Electric Circuits	4	EE 124	Electric Machinery	4
		—			—
		18			18

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
CE 123	Water Supply	4	CE 124	Water Purification	3
CE 135	Soils	3	CE 116	Highways	3
CE 133	Reinforced Concrete	4	CE 140	Indeterminate Structures . .	3
ME 103	Heat Power	3	ME 104	Heat Power	3
ME 115	Mech. Eng. Laboratory . . .	1	ME 116	Mech. Eng. Laboratory . . .	1
	Approved Free Electives . .	3		Approved Free Electives . .	5
		—			—
		18			18

GROUP TWO

ELECTRICAL ENGINEERING

Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	ME 52	Kinetics—Mechanism	4
EE 51	Survey—Electrical Engineering	1	EE 52	Fields	3
Engl E93	Advanced Composition . . .	3		Physical Education	1
	Physical Education	1			—
		—			19
		19			

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
EE 101	Circuits	3	EE 102	Circuits	3
EE 107	Circuits Laboratory	1	EE 108	Circuits Laboratory	1
EE 105	Measurements	4	EE 106	Electronics	4
Math 131	Differential Equations . . .	3	EE 148	D-C Machinery	3
ME 103	Heat Power	3	ME 104	Heat Power	3
ME 115	Mech. Eng. Laboratory . . .	1	ME 116	Mech. Eng. Laboratory . . .	1
GE 128	Hydraulics	3	Engl 151	Public Speaking	3
		—			—
		18			18

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
EE 257	A-C Machinery	3	EE 258	A-C Machinery	3
EE 163	Machinery Laboratory	1	EE 164	Machinery Laboratory	1
EE 261	Communications	4	EE 262	Communications	4
EE 165	Seminar	1	EE 166	Seminar	1
EE 159	Transmission	3	GE 107	Strength of Materials	3
	Approved Free Electives ..	6	GE 109	Materials Laboratory	1
		—		Approved Free Electives ..	5
		18			—
					18

GROUP THREE

MECHANICAL ENGINEERING

Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
Math 52	Calculus II	3	Math 53	Calculus III	3
Phys 51	Physics	5	Phys 52	Physics	5
Econ 51	Economics	3	Econ 52	Economics	3
GE 57	Statics	3	ME 52	Kinetics-Mechanism	4
ME 53	Materials	3	Engl E93	Advanced Composition	3
ME 57	Processes	2		Physical Education	1
	Physical Education	1			—
		—			19
		20			

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
ME 101	Thermodynamics	3	ME 102	Thermodynamics	3
ME 113	Mech. Eng. Laboratory	1	ME 114	Mech. Eng. Laboratory	2
ME 105	Fluid Mechanics	3	ME 108	Aeronautics	3
GE 107	Strength of Materials	3	ME 106	Heat Transfer	3
GE 109	Materials Laboratory	1	ME 150	Machine Design	3
EE 123	Electric Circuits	4	EE 124	Electric Machinery	4
Engl 151	Public Speaking	3			—
		—			18
		18			

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
		S.H.			S.H.
ME 151	Machine Design	4	ME 158	Industrial Engineering	3
ME 155	Internal Combustion Engines	3	ME 162	Power Plants	3
ME 153	Heating—Air Conditioning ..	3	ME 154	Refrigeration	3
ME 159	Mech. Eng. Laboratory	2	ME 160	Mech. Eng. Laboratory	2
	Approved Free Electives ..	6		Approved Free Electives ..	6
		—			—
		18			17

Bachelor of Science in Nursing Education

The requirements for the degree of Bachelor of Science in Nursing Education are designed to prepare qualified graduate nurses for administrative, teaching, and supervisory positions in schools of nursing and in nursing service agencies.

To be eligible for admission to Duke University as a candidate for this degree a student must meet the following requirements:

1. Graduation from an approved secondary school with at least fifteen acceptable units of credit. (See specific requirements for admission to Trinity College and the Woman's College.)

2. Graduation from an approved school of nursing which provides satisfactory preparation in medical, surgical, pediatric, and obstetric nursing, as a minimum (psychiatric nursing is desirable).

3. Satisfactory scores on specified tests.

4. Supervisory ratings from three individuals, preferably former teachers and supervisors with whom the individual has had fairly recent contact.

Credit for 120 semester hours (exclusive of physical education) on which an average grade of at least C is made is required for the degree of Bachelor of Science in Nursing Education. The work of the final year must be taken in residence at Duke University. The program of studies leading to this degree must include:

	S.H.
1. MINIMUM GENERAL EDUCATION REQUIREMENTS.....	38-50
May be taken at Duke University or at any accredited college or university.	
English 1-2	6
*Natural science	8
History (1-2 or 51-52)	6
Economics (51-52)	
Political Science (61-62)	
Sociology (91-92 or 101)	3-6
Psychology (91, 100 or 101)	3-6
†Electives	12-18
2. BASIC NURSING PROGRAM.....	maximum 40
May be taken at the Duke School of Nursing or at any approved school of nursing. The amount of credit which is granted for the nursing school program is determined on an individual basis.	
3. COURSES IN EDUCATION AND NURSING EDUCATION.....	3
88 Psychological Foundation of Modern Education.....	3
118 Educational Psychology—Psychological Development.....	3
84N Social Foundations of Nursing Education.....	3
101N The Curriculum of the School of Nursing.....	3
115-116N Nursing Education: Principles and Practices.....	8
117 Community Nursing Service—Seminar in Field Trips to Community Agencies	3
4. FIELD OF CONCENTRATION.....	15
Fifteen semester hours in one field, such as chemistry, physics, psychology, sociology, zoology, or in a clinical area in conjunction with related subjects. No freshman work may be included in these 15 semester hours.	
5. PROFESSIONAL EXPERIENCE	
One year of experience as a graduate nurse is required before the degree is awarded.	

* Botany 1-2, Chemistry 1-2, Geology 51-52, Physics 1-2, Zoology 1-2.

† Literature, art, music, religion, ethics, language are suggested.

Academic-Professional Courses

The provision whereby a senior may elect the work of the first year in a professional school of the University shall apply solely to eligible students in Trinity College or the Woman's College. The privilege of completing a combined course for the degree is conditioned upon admission to the professional school at the close of the junior year. A student thus admitted registers as a senior in the College and as a first-year student in the professional school.

ACADEMIC-FORESTRY COMBINATION

A student who has completed the program of study given below with an average grade of C or higher in accordance with the academic regulations as stated in this Bulletin may, with the approval of the Dean of the College and the Admissions Committee of the School of Forestry, transfer to the School of Forestry. Upon the satisfactory completion of the work of the first year in the School of Forestry the student may become eligible for the degree of Bachelor of Science from Trinity College, Duke University. This provision shall apply solely to eligible undergraduates who have completed three years in residence at Duke University.

Students wishing information concerning admission to the School of Forestry are invited to consult with the dean of that school. Completion of the first three years of work necessary to qualify for the Academic-Forestry Combination does not insure admission to the Duke University School of Forestry, nor impose any restriction upon the School's freedom in selecting students for admission. The professional degree of Master of Forestry may be obtained upon the satisfactory completion of the work of the second year in the School of Forestry.

The program of studies in preparation for admission to the School of Forestry under the combination program includes the following work:

UNIFORM COURSE REQUIREMENTS

	S.H.
Uniform Course Requirements for the B.S. Degree	48-66
Additional Required Courses	24-26
Electives to Make a Total of	94
Summer Field Work	13

These requirements are described in the Requirements for the Bachelor of Science degree in this Bulletin. Spanish may be substituted for French in the foreign language requirement. The natural science requirement is met by completion of Botany 1-2. The economics, history, or political science requirement is met by completion of Economics 51-52. The student who does not present for entrance two acceptable units in history must meet the restricted elective requirement by completion of 6 semester hours in history.

ADDITIONAL REQUIRED COURSES.—The additional required courses are as follows:

	S.H.
Chemistry 1-2	8
Engineering Drawing 1-2	4
Geology 51	4
Physics 1-2 or 51-52	8-10
	<u>24-26</u>

ELECTIVES.—The electives are normally chosen from botany, chemistry, economics, mathematics and philosophy. A minimum of 94 semester hours must be obtained, exclusive of summer field work, for uniform course requirements, additional required courses and electives.

SUMMER FIELD WORK.—This work of 13 weeks, preferably to be taken upon completion of the junior year, includes:

	S.H.
Civil Engineering S110. Plane Surveying	4
Forestry S150. Forest Surveying	5
Forestry S151. Forest Mensuration	4
	<u>13</u>

Students in this combination should have their programs approved by the special adviser for students in the Academic-Forestry Combination. The name of this adviser may be obtained at the dean's office.

ACADEMIC-LAW COMBINATION

A student who has completed with an average grade of C or higher, 96 semester hours of undergraduate work, including the uniform course requirements for the degree of Bachelor of Arts and the work of the junior year in his major and related fields, may, with the approval of the dean of the College, transfer to the Duke University School of Law and be eligible for the degree of Bachelor of Arts from Duke University upon the satisfactory completion therein of the work of the first year.

It is understood that this provision shall apply solely to eligible undergraduates who have completed three years in residence in Duke University, and that not less than the full first-year's work of the Law School will be acceptable for credit towards the bachelor degree.

No single discipline or program of study can be described as the best preparation for the study of law since there are various methods of approach to legal study. Students differ with respect to the undergraduate studies by which they profit most in preparing themselves for law school.

Completion of the undergraduate work necessary to qualify for the Academic-Law Combination does not insure admission to the Duke University School of Law, nor impose any restriction whatever upon its freedom in selecting students for admission. Students wishing further information are invited to consult with the Dean of the School of Law.

ACADEMIC-NURSING COMBLNATION

A student who completes the three-year nursing program with an average grade of C or better may, upon recommendation of the Dean of the School of Nursing, apply for admission to the Woman's College of Duke University. If accepted, she may obtain the degree of Bachelor of Arts or Bachelor of Science by fulfilling the requirements of either degree.

Forty semester hours of credit toward the 120 semester hours (exclusive of physical education) required for the Bachelor's degree are allowed for the three-year nursing program. At least 30 semester hours, of which 24 semester hours must be in courses numbered 100 or above, must be taken in residence in the Woman's College. An average grade of C or better is required for all work.

The program of studies leading to the degree of Bachelor of Arts must include:

	S.H.
1. UNIFORM COURSE REQUIREMENTS	47-59
English 1-2	6
Language (completion of the third college year)	6-18
Natural Science	11
Religion	6
Social Science and History	12
Literature, Music, Art, and Philosophy	6
2. BASIC NURSING PROGRAM	40
3. FIELD OF CONCENTRATION	12
At least 12 semester hours in one department other than nursing in courses not primarily open to freshmen	12
4. ELECTIVES	9-21

To be eligible for the degree of Bachelor of Science, a student must complete the course of study outlined under the Requirements for the Degree of Bachelor of Science.

Courses of Instruction

Trinity College and the Woman's College



NOTE: Courses primarily for freshmen are numbered from 1 to 49; those primarily for sophomores are numbered from 50 to 99; those primarily for juniors and seniors from 100 to 199; those primarily for seniors and graduates from 200 to 299. The amount of credit for each course is given in semester hours following the description of the course.

The designation (w) or (E) indicates that the course is to be given on the West Campus or on the East Campus. The designation E means Engineering; L, LAW; DS, Divinity School. When this designation precedes a course number, the course is not approved for graduate credit.

Odd-numbered courses are offered in the fall semester, and even-numbered courses are offered in the spring semester. Double numbers separated by a hyphen indicate that the course is a year-course and must normally be continued throughout the year if credit is received. A student must secure written permission from the instructor in order to receive credit for either semester of a year-course. Double numbers separated by a comma indicate that although the course is a year-course credit may be received for either semester without special permission.

COURSES OPEN PRIMARILY TO FRESHMEN

Air Science 1-2

Art 1-2, 1L-2L

Botany 1, 2

Chemistry 1-2

Economics 11

Education 1, 5

English 1-2

French 1-2, 3-4

German 1-2, 3-4

Greek 1-2, 15

Health Education 41

History 1, 2, E1-2

Latin 1-2, 3, 4

Mathematics 1, 5, 6, 16

Music 1-2, 11-12, 47-48

Naval Science 101, 102

Philosophy 48, 49

Physical Education 1, 2

Physics 1-2

Political Science 11-12

Religion 1, 2

Spanish 1-2, 3-4

Zoology 1, 2

AESTHETICS, ART, AND MUSIC

ASSISTANT PROFESSOR EARL G. MUELLER, CHAIRMAN OF THE EXECUTIVE COMMITTEE;

ASSOCIATE PROFESSOR SUNDERLAND, DIRECTOR OF UNDERGRADUATE STUDIES IN ART;

ASSOCIATE PROFESSOR HALL, SUPERVISOR OF FRESHMAN INSTRUCTION IN ART;

ASSISTANT PROFESSOR JULIA W. MUELLER, DIRECTOR OF UNDERGRADUATE

STUDIES IN MUSIC; ASSOCIATE PROFESSOR BONE, SUPERVISOR OF

FRESHMAN INSTRUCTION IN MUSIC; ASSOCIATE PROFESSORS

JENKINS AND MARKMAN; ASSISTANT PROFESSORS

BRYAN, KLENZ, SAVILLE, WITHERS AND WOOD;

MRS. BERNSTEIN, MESSRS. BRODERSON

AND STARS

AESTHETICS

FOR SENIORS AND GRADUATES

201-202. THE PHILOSOPHY OF ART.—Analysis with the aid of examples of general terms used in the discussion of art. Reference in recent aesthetic theories.
6 s.h. (E)

[Not offered in 1954-55]

213-214. HISTORY OF AESTHETICS.—Theories of art and beauty from Pythagoras to Croce. 6 s.h. (E)
[Not offered in 1954-55]

ART

The introductory courses 1-2 or 51-52 are prerequisite for all courses in the History of Art and 1L-2L or 51L-52L for all courses in Design.

FUNDAMENTALS

1-2. INTRODUCTION TO ART.—This course aims (a) to equip the general student with sufficient vocabulary, both verbal and visual, for a basic understanding of architecture, sculpture, painting, and the minor arts as material reflections of man's ideas; and (b) to introduce the more specialized student to the principles of art criticism, the use of documents, and the nature of media. Open only to freshmen; others, see Art 51-52. 6 s.h. (E & W)

ASSOCIATE PROFESSORS HALL AND MARKMAN

1L-2L. DESIGN LABORATORY.—This course aims to develop the student's visual faculty through practice with design elements and experience with media. Freshmen intending to elect further courses in Art are advised to carry this course concurrently with Art 1-2. Open only to freshmen enrolled in Art 1-2; others, see Art 51L-52L. 2 s.h. (E)

ASSISTANT PROFESSOR E. MUELLER; MR. BRODERSON

51-52. INTRODUCTION TO ART.—The aims of this course are identical with those of Art 1-2; the content and method are adapted to the capacities of upperclassmen. Open only to upperclassmen who have not completed Art 1-2. A senior in his last semester may receive credit for one semester. 6 s.h. (E & W)

ASSOCIATE PROFESSORS MARKMAN AND SUNDERLAND

51L-52L. DESIGN LABORATORY.—The aims, content, and method of this course are similar to those of Art 1L-2L. Upperclassmen intending to elect further courses in Art are advised to carry this course concurrently with Art 51-52. Open only to upperclassmen enrolled in Art 51-52, and to those who have completed Art 1-2 or 51-52 without electing Design Laboratory. A senior in his last semester may receive credit for one semester. 2 s.h. (E)

ASSISTANT PROFESSOR E. MUELLER; MR. BRODERSON

HISTORY OF ART

101. MEDIAEVAL ARCHITECTURE.—A survey of Christian architecture in the Near East and Eastern and Western Europe from the beginnings of the mediaeval style in the late classical period to its disintegration in the fifteenth century. 3 s.h. (E)

ASSOCIATE PROFESSOR SUNDERLAND

102. MEDIAEVAL PAINTING AND SCULPTURE.—A study of painting and sculpture in Western Europe from the late classical period through the fourteenth century. 3 s.h. (E)

ASSOCIATE PROFESSOR SUNDERLAND

103. RENAISSANCE AND BAROQUE ARCHITECTURE: ITALY.—Architectural patronage of the great families and the Church, as evidenced by the works of individual designers from Brunelleschi through Michelangelo and Palladio to Borromini. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

104. RENAISSANCE AND BAROQUE ARCHITECTURE: SPAIN AND THE NORTH.—An inquiry into the extension of Italian Renaissance and Baroque influence in architecture, and its modification under local conditions elsewhere in Europe. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

105. EUROPEAN ARCHITECTURE SINCE 1700.—An analysis of the sources of contemporary European architecture in the historic revival styles and counter-revolts, technical invention and new structural materials, industrial expansion and social planning. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

106. ARCHITECTURE OF THE AMERICAS.—A study of building in the Western Hemisphere from the Precolumbian cultures to the present with emphasis on the architecture of the United States since the Revolution. 3 s.h. (E)

ASSOCIATE PROFESSOR HALL

110. ENGLISH ARCHITECTURE.—The English home, church, and community, studied as the architectural reflection of continental influences, independent developments in the British Isles, and colonial expansion. This course is intentionally directed toward the interests of students majoring in history or literature. 3 s.h. (E) ASSOCIATE PROFESSOR HALL

123. RENAISSANCE PAINTING: ITALY.—A study of Italian painting, mainly in Florence, from the end of the fourteenth through the fifteenth century. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

124. ITALIAN ART AFTER 1500.—A study of the mature and late phases in the evolution of Italian Renaissance painting and sculpture. 3 s.h. (E) ASSOCIATE PROFESSOR JENKINS

125. RENAISSANCE PAINTING: THE NORTH.—A study of painting in the Netherlands in the fifteenth and sixteenth centuries. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

126. BAROQUE PAINTING: THE NORTH.—A study of the character and tendencies of seventeenth-century painting in Spain, France, and the Lowlands. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

129. PAINTING SINCE 1700.—An investigation of the development of painting in the eighteenth and nineteenth centuries in Europe and in America. 3 s.h. (E) ASSOCIATE PROFESSOR SUNDERLAND

130. CONTEMPORARY ART.—A study of the twentieth-century movements in painting and sculpture in Europe and the Americas. 3 s.h. (E) ASSISTANT PROFESSOR E. MUELLER

133. A HISTORY OF PRINTS AND DRAWINGS.—The evolution of the principal graphic techniques, media and styles from the fifteenth century to the present. 3 s.h. (E) ASSISTANT PROFESSOR E. MUELLER

150. SURVEY OF PAINTING.—A history of European painting from the Renaissance to the present time. Open to upperclassmen who are not majors and who have not had Art I-2 or 51-52. 3 s.h. (E) ASSOCIATE PROFESSOR JENKINS
[Not offered in 1954-55]

215. RELIGIOUS ART OF THE ANCIENT NEAR EAST.—A specialized study of the development of art, particularly architecture and sculpture, as the material expression of religious ideas in Egypt, Mesopotamia, and in part of Syria and Palestine, to the Persian conquest. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

216. RELIGIOUS ART OF THE CLASSICAL WORLD.—A specialized study of the religious art, particularly architecture and sculpture, of Greece and Rome, with special emphasis on the monuments in the Near East. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

217. AEGEAN ART.—A study of the problems of Aegean art as the forerunner of Greek art and in relation to the contemporary civilization of the eastern Mediterranean world. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

218. EARLY GREEK ART.—A study of the problems of the origin and development of Greek art in the Geometric period to the end of the Archaic. 3 s.h. (w) ASSOCIATE PROFESSOR MARKMAN

DESIGN

Students other than art majors may receive not more than eight semester hours credit for work in studio courses. For any number of semester hours of credit in studio courses an equal number of hours must be taken in history and criticism.

53-54. BEGINNING STUDIO.—A studio course offering experiment and practice with formal elements of composition in various media. Particular emphasis will be given to drawing; watercolor, collage, and three-dimensional media will be secondarily considered. 4 s.h. (E) ASSISTANT PROFESSOR MUELLER, MR. BRODERSON

55, 56. **PAINTING.**—A studio course designed to give experience in painting media with individual and group criticism, and discussion of important historic or contemporary ideas in painting as related to student work. Prerequisite: Art 53-54 or consent of the instructor. 4 s.h. (E)

ASSISTANT PROFESSOR MUELLER, MR. BRODERSON

157, 158. **ADVANCED PAINTING.**—Emphasis is given to the techniques of various painting and design media. Prerequisite: 55, 56. 4 s.h. (E)

ASSISTANT PROFESSOR MUELLER, MR. BRODERSON

159, 160. **PRINTMAKING.**—This course presupposes a knowledge of design and skill in drawing. Practice in wood engraving; block printing; and in copperplate engraving, etching, aquatint and drypoint. Reference will be made to prints in relation to the design of the book, and historic examples of the art of the print will be analyzed in the study of these techniques. Prerequisite: 53-54. 4 s.h. (E)

ASSISTANT PROFESSOR E. MUELLER; MR. BRODERSON

DEPARTMENTAL MAJOR IN ART

Prerequisites: Introduction to Art (1-2 or 51-52). Design Laboratory (1L-2L or 51L-52L).

Major Requirements: The student will select in consultation with his departmental adviser a sequence of courses emphasizing either history or design.

History of Art: 24 additional semester hours, of which six hours must be in the 200 group, and four hours may be in design. Distribution emphasizing at least two special areas of study is to be determined with the adviser.

Design: 22 additional semester hours, of which sixteen hours must be in design and six hours from courses 102, 123, 124, 125, 126, 129, or 130.

MUSIC

Courses in music are offered both for the general student who wishes to acquire knowledge of music as literature and on a more technical level for those prepared to major in the field. The courses marked * are open to general students without prerequisites.

THEORY

*11-12. **THEORY I.**—The elements of harmony, rhythm, and form; the visual and aural recognition of scales, intervals, triads, and seventh chords, and their functions in relation to the system of tonality; harmonization of melodies; development of rhythmic discrimination. Designed for those students who wish to pursue a more technical study of music. Three lectures and two laboratory hours. Open to freshmen only. 8 s.h. (E)

STAFF

*61-62. **THEORY I.**—An amplification of Music 11-12. Open to upperclassmen who have not had Music 11-12. 8 s.h. (E)

STAFF

73-74. **THEORY II.**—A continuation of Music 11-12, plus analysis and composition of the smaller forms; further development of proficiency in harmonization; continuation of aural training; introductory study of counterpoint. Prerequisite: Music 11-12 or 61-62. 6 s.h. (E)

ASSISTANT PROFESSORS BRYAN AND KLENZ

117-118. **THEORY III.**—A continuation of Music 73-74. Emphasis upon development of technical and expressive means and stylistic treatment by practical work in composition, and analysis and observation of larger forms; further study of counterpoint. The completion of an original large form composition for chamber group, chorus, or orchestra. Prerequisites: Music 11-12 or 61-62, and 73-74. 4 s.h. (E)

ASSISTANT PROFESSOR KLENZ

121. **CONDUCTING.**—The conducting of orchestral and vocal scores. Score-reading and analysis, principles of interpretation, establishment of vocal and instrumental conductorial techniques leading to practical experience in conducting the department musical organizations in rehearsal. Prerequisites: Music 11-12 or 61-62, and 73, or consent of the instructor. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

122. ORCHESTRATION.—A study of the technical characteristics and transpositions of the instruments of the modern symphony orchestra and concert band. Instrumentation of piano scores or original compositions for string, woodwind, brass ensembles, and for full symphony orchestra or concert band. Prerequisites: Music 11-12 or 61-62, and 73, or consent of the instructor. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

HISTORY AND CRITICISM

***1-2. INTRODUCTION TO MUSIC.**—Rhythm, melody, harmony, form. The instruments of the orchestra and their use. Orchestral, chamber, choral and operatic music of the Classic and Romantic periods. Designed for those students who wish to acquire a general appreciation of music. Open only to freshmen who do not plan to major in music. 6 s.h. (E)

ASSOCIATE PROFESSOR BONE; ASSISTANT PROFESSORS WITHERS AND WOOD

***51-52. INTRODUCTION TO MUSIC.**—Music from 1700 to the present day. Acquisition of a reading knowledge of notes, rhythms, musical symbols. Study of forms, media, styles and the lives and works of great representative composers. Not open to music majors or to students who have had Music 1-2. 6 s.h. (E)

ASSISTANT PROFESSORS KLENZ AND J. MUELLER

95-96. HISTORY OF MUSIC I.—Historical background and development of music in the Classical, Romantic, and Contemporary period. Study of representative compositions from the Mannheim school through Beethoven, first semester; Schubert to the present, second semester. Prerequisites: Music 1-2 or 11-12 or 61-62, or consent of the instructor. 6 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

***133. ORCHESTRAL LITERATURE.**—A study of orchestral suites, overtures, concerti, symphonies and symphonic poems selected from literature of the eighteenth century to the present. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

***134. CHORAL LITERATURE.**—A study of representative oratorios, cantatas, and masses from Bach to Stravinsky; religious and social implications of sacred choral compositions and performance from the Baroque to the present. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

135. PIANO LITERATURE.—A comprehensive survey of the great works for keyboard instruments, from the time of the English virginal composers to the present. Prerequisites: Music 47A, 48A, 97A, and 98A, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR WITHERS

136. VOCAL REPERTOIRE.—A study of standard recital repertoire; old Italian and old English songs, German lieder, and the French art song. Open to junior and senior Applied Voice majors. 3 s.h. (E)

ASSISTANT PROFESSOR WOOD

137. CHAMBER MUSIC.—A study of form, style, and interpretation of masterpieces of chamber music. Prerequisites: Music 1-2 or 51-52, or 11-12 or 61-62, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR J. MUELLER

138. CONTEMPORARY MUSIC.—A critical survey of contemporary stylistic trends and theory in the light of their twentieth-century background. Prerequisites: Music 1-2 or 51-52 or 11-12 or 61-62, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR KLENZ

145-146. HISTORY OF MUSIC II.—History and technical development of music in Mediaeval, Renaissance, and Baroque periods against a background of European cultural history. First semester: late classic, early Christian music; the evolution of Gregorian Chant; Romanesque, Troubadour and Gothic forms. Second semester: Renaissance and Baroque (J. S. Bach). Prerequisites: Music 95-96 or consent of instructor. 6 s.h. (E)

ASSISTANT PROFESSOR KLENZ

***164. MUSIC IN THE NINETEENTH CENTURY.**—A study of the music of the nineteenth century, from Beethoven to Debussy, with attention to artistic and literary influences, and the relations among the creative minds of the time. Individual projects. 3 s.h. (E)

ASSISTANT PROFESSOR J. MUELLER

*165. OPERA.—Opera from Handel to Strauss; aesthetic and cultural implications of opera from the Baroque to the present. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

195-196. COLLEGIUM MUSICUM (HISTORY OF MUSIC III).—Studies in the integration of music history, theory, and performance. Survey of sources, monuments, and bibliographical techniques. Preparation for performance of representative musical literature through analysis, realization of notations, and stylistic reconstruction. Classroom discussion and reports; also laboratory. Designed for music majors in history or theory and open to others by consent of the instructor. 4 s.h. Laboratory may be taken separately under Applied Music, Medium F. (E)

ASSISTANT PROFESSOR KLENZ

MUSIC EDUCATION

57-58. VOCAL DICTION.—Problems of diction as specifically applied to the art of singing. Required of all Applied Voice majors. 2 s.h. (E)

ASSISTANT PROFESSOR WOOD

106. PIANO METHODS AND MATERIALS.—A study of the materials and methods of piano pedagogy. The appropriate choice of essential and supplementary literature. Development of technique, style, and musicianship. Supervised practice teaching. Prerequisites: Music 47A, 48A, 97A, and 98A, or consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR WITHERS

107. VOCAL PEDAGOGY.—The problems of private vocal teaching. A detailed study of the function of the vocal mechanism and of the psychological factors in teaching. Open to junior and senior Applied Voice majors, and others with the consent of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR WOOD

151. PUBLIC SCHOOL MUSIC EDUCATION.—For Elementary Education majors. Child voice and song; rhythmic activities; discriminative listening; music-reading; use of elementary instruments such as autoharp, tonette, and rhythm band instruments; music as a creative art in its own right and as an adjunct to other studies. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

APPLIED MUSIC

The study of Applied Music concerns the use and understanding of technics of performance in relation to the standard literature of each medium or ensemble group. Instruction is offered in the following media: A. Piano; B. Strings; C. Woodwinds; D. Brass; E. Voice; F. Ensemble—Piano, Instrumental, Vocal, and the Departmental Ensembles listed below. Instruction in media A through E may be private or in classes limited to a minimum of 4 and a maximum of 7 students. Class instruction is restricted to the first 4 grades of proficiency. Class instruction shall be designated by adding the letter X to the appropriate medium and year-in-school classification. (Example: junior year, Woodwinds, class instruction is recorded 147CX.)

Students who wish to enroll in Applied Music courses *must* consult with the appropriate faculty member *before* registering for a course.

47A-48A, 97A-98A, 147A-148A, 197A-198A. PIANO.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSOR WITHERS; MRS. BERNSTEIN

47B-48B, 97B-98B, 147B-148B, 197B-198B. VIOLIN, VIOLA, CELLO.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSORS KLENZ AND J. MUELLER

47C-48C, 97C-98C, 147C-148C, 197C-198C. WOODWINDS.—For freshmen, sophomores, juniors, seniors. (E)

ASSOCIATE PROFESSOR BONE

47D-48D, 97D-98D, 147D-148D, 197D-198D. BRASS.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSOR BRYAN

47E-48E, 97E-98E, 147E-148E, 197E-198E. VOICE.—For freshmen, sophomores, juniors, seniors. (E)

ASSISTANT PROFESSOR WOOD

47F-48F, 97F-98F, 147F-148F, 197F-198F. ENSEMBLE.—For freshmen, sophomores, juniors, seniors. Prerequisite: consent of the instructor. 2 s.h. (E)

STAFF

Credits: Credit for Media A through E will be granted on the basis of 2 s.h. per semester for one period of private study and a minimum of 6 hours practice per week; 1 s.h. per semester for one period of class study and a minimum of 6 hours practice per week.

Credit for instruction in Medium F will be granted on the basis of 1 s.h. per semester for one period of instruction per week and a minimum of 6 hours practice per week. No additional fee required.

Students other than Music Majors may receive not more than 8 s.h. credit for work in Applied Music. For any number of hours in Applied Music an equal number of hours must be taken in Music Theory or in Music History and Criticism.

Music Majors may take a minimum of 6 s.h. and a maximum of 14 s.h. in Applied Music according to the following areas of concentration:

Majors in Music Theory or in Music History and Criticism must earn 6 s.h. credit in Applied Music. (Credit may be reckoned from Grade I.)

Majors in Applied Music may earn a maximum of 14 s.h. credit in Applied Music.

Majors in Music Education must earn credit in Applied Music as follows in order to qualify for state certification in North Carolina:

General (Vocal) Major—13 s.h.

a. Voice, reckoned from Grade I—6 s.h.

b. Piano, reckoned from Grade I—6 s.h.

c. Ensemble—1 s.h.

Instrumental Major—13 s.h.

a. Major medium, reckoned from Grade III—8 s.h.

b. Instrument classes—1 s.h. each of woodwinds, brass, string instruments other than major-minor instruments above—3 s.h.

c. Ensemble—2 s.h.

d. For purposes of certification in the State of North Carolina a student should earn credits beyond those accepted for graduation as follows: Piano proficiency sufficient to play at sight hymns or music of equivalent difficulty and/or study of a string instrument—4 s.h. and participation in one of the departmental organizations listed below—4 s.h.

Fees per Semester: Fees are charged for Applied Music media A, B, C, D, and E, and for practice facilities. They are payable to the Treasurer's Office of Duke University at the beginning of each semester, as follows:

One ½ hour private lesson per week for one semester.....	\$45.00
Two ½ hour private lessons per week or one 1 hour private lesson per week for one semester.....	80.00
One 1 hour class lesson per week for one semester.....	25.00
One hour's daily use of cubicle with piano for one semester....	15.00
One hour's daily use of cubicle without piano for one semester..	10.00

DEPARTMENTAL ENSEMBLES

Brass Ensemble
Chamber Orchestra
Collegium Musicum
Madrigal Singers

DEPARTMENTAL ORGANIZATIONS

Duke University Concert Band
Duke University Symphony Orchestra

DEPARTMENTAL MAJOR IN MUSIC

Prerequisite: Music 11-12 or 61-62.

Major Requirements: 24 s.h. including 6 s.h. in Applied Music. The major student will select, in consultation with his departmental adviser, a sequence of Music courses emphasizing (a) theory, or (b) history and criticism, or (c) education, or (d) the use and understanding of a particular medium.

AIR SCIENCE

PROFESSOR KNIGHT, COLONEL, USAF, CHAIRMAN; ASSOCIATE PROFESSOR MCBRYDE, LIEUTENANT COLONEL, USAF, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR SMITH, CAPTAIN, USAF, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSORS RENKEN, MAJOR, USAF, AND CLARK, CAPTAIN, USAF; MAJOR MYERS, USAF, AND CAPTAIN STEVENS, USAF

ELIGIBILITY REQUIREMENTS.—All physically qualified freshmen who are citizens of the United States and are enrolled in Trinity College or the College of Engineering are eligible to enroll in the Air Force ROTC. Veterans may be exempted from the freshman and sophomore courses (AS 1-2 or AS 51-52). In special cases where permission has been granted, certain qualified students from the Graduate and Professional Schools may be enrolled.

DEPOSIT REQUIRED.—Each student must make a deposit of twenty dollars with the University Treasurer to insure return of all government property.

AIR FORCE ROTC COURSES.—All students pursue the same generalized courses. No flying training is included in the college program. All specialized training will be given when the individual enters the Air Force.

The courses are established by the United States Air Force and are approved by the College as electives for all undergraduates. Field or laboratory instruction in leadership, drill, and exercise of command is included as a part of all courses to indoctrinate the student in the fundamental principles of command.

BASIC COURSES

The following courses are required of students in the Air Force Reserve Officers Training Corps, as outlined in the various curricula:

AS 1-2. FIRST YEAR BASIC AIR SCIENCE.—This course introduces the student to the AFROTC Program and the Field of Aviation. The fundamentals of global geography are studied in relationship to international tensions and the resulting formation of security organizations. The course concludes with an analysis of the instruments of National Military Security. 4 s.h. (w) STAFF

AS 51-52. SECOND YEAR BASIC AIR SCIENCE.—Stress is laid upon the elements of aerial warfare including targets, weapons, aircraft, air oceans, air bases, and Air Force organizations. A survey is made of the careers open to personnel in the Air Force. 4 s.h. (w) STAFF

ADVANCED COURSES

All students selected to continue in Air Science pursue:

AS 101-102. FIRST YEAR ADVANCED AIR SCIENCE.—The first semester is concerned with the Air Force commander and his staff; techniques of problem solving; communications processes and Air Force correspondence; instructing in the Air Force; military law, courts and boards. The second half of the course deals with Applied Air Science including aircraft engineering, navigation and weather. Attention is also given to the functions of an Air Force base. Prerequisites: AS 1-2 and 51-52 or equivalent. 8 s.h. (w) STAFF

AS 201-202. SECOND YEAR ADVANCED AIR SCIENCE.—The first semester includes a critique of summer camp training; seminar studies in the principles of leadership and management; and the relationship of military aviation to the art of war. The second semester is concerned with the military aspects of world political geography and with career guidance. Prerequisites: AS 1-2 and 51-52 or equivalent, and AS 101-102. 8 s.h. (w) STAFF

BOTANY

PROFESSOR BLOMQUIST, CHAIRMAN; ASSOCIATE PROFESSOR ANDERSON, DIRECTOR OF UNDERGRADUATE STUDIES; DR. MANLY, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSOR PHILPOTT, SUPERVISOR OF FRESHMAN INSTRUCTION (WOMAN'S COLLEGE); PROFESSORS HARRAR, KRAMER, OOSTING, AND WOLF; ASSOCIATE PROFESSORS BILLINGS, NAYLOR, AND PERRY; ASSISTANT PROFESSOR AND RESEARCH ASSOCIATE SCHUSTER; AND ASSISTANTS

1. GENERAL BOTANY.—An introduction to the structure and life-processes of seed plants and the environmental factors influencing their distribution. Laboratory, discussions, and field trips. Three two-hour periods. 4 s.h. (w & e) STAFF

2. GENERAL BOTANY.—A survey of the plant kingdom with emphasis on reproduction and an introduction to identification. Three two-hour periods. Prerequisite: Botany 1. 4 s.h. (w & E) STAFF

51. CULTURE AND PROPAGATION OF PLANTS.—Experimental studies of the processes involved in growth, and the application of this knowledge to the selection, growth, and propagation of plants. Prerequisite: one year of botany. 4 s.h. (w) PROFESSOR KRAMER

52. PLANT IDENTIFICATION.—Practice in the identification of local plants, especially flowering plants, and a study of the principles and rules underlying plant classification. Laboratory, lectures, and field trips. Prerequisite: one year of botany. 4 s.h. (w) PROFESSOR BLUMQUIST

53. ECOLOGY OF ECONOMIC PLANTS.—The principles of plant growth and distribution as applied to crop plants. Forest, grassland, and representative cultivated species will be considered in relation to environment. Prerequisite: one year of a natural science. 3 s.h. (E) PROFESSOR OOSTING

55. MORPHOLOGY AND ANATOMY OF VASCULAR PLANTS.—A comparative study of representative ferns and seed plants, including vegetative and reproductive structures. Prerequisite: one year of botany. 4 s.h. (E) ASSISTANT PROFESSOR PHILPOTT

101. PRINCIPLES OF HEREDITY.—The basic principles of heredity and their significance. Lectures, three hours; laboratory, two hours; conference (attendance optional), one hour. Laboratory work includes experimental breeding of the fruit fly. May be taken as a lecture course without laboratory. Prerequisite: one (high-school or college) course in biology, botany, or zoology. High-school or college algebra recommended. 3 or 4 s.h. (w) ASSOCIATE PROFESSOR PERRY

103. GENERAL BACTERIOLOGY.—A study of the morphology and fundamental physiological processes of bacteria; their relationship to sanitation, public health, soil fertility, and food preservation. Prerequisite: one year of botany or zoology, or equivalent. 4 s.h. (w) PROFESSOR WOLF

104. THE STRUCTURE AND IDENTIFICATION OF LOWER PLANTS.—A study of representative examples of algae, fungi, mosses and liverworts, including collection, identification, and classification of common forms. Offered in alternate years. Prerequisite: one year of botany. 4 s.h. (w) ASSOCIATE PROFESSOR ANDERSON

151. INTRODUCTORY PLANT PHYSIOLOGY.—The principal physiological processes of plants, including water relations, synthesis and use of foods, and growth phenomena. Prerequisite: Botany 1, 2 or equivalent; one year of chemistry recommended. 4 s.h. (w) PROFESSOR KRAMER

156. PLANT ECOLOGY.—The principal factors affecting plants and plant communities as they exist in different environments. Laboratory, lectures, and field trips. Prerequisites: Botany 1, 2 and 52, or equivalent. 4 s.h. (E) ASSOCIATE PROFESSOR BILLINGS

202. GENETICS.—The principles of heredity, their cytological basis, and their bearing on other fields of biology. Laboratory work involves experimental breeding of the fruit fly and interpretation of data from the breeding of plants. Offered in alternate years. Prerequisites: one year of botany or zoology, or equivalent, and college algebra. 4 s.h. (w) ASSOCIATE PROFESSOR PERRY

203. PLANT CYTOLOGY.—A study of the structure and organization of plant cells in relation to growth, reproduction and especially heredity. Offered in alternate years. Prerequisite: one year of botany. 4 s.h. (w) ASSOCIATE PROFESSOR ANDERSON

204. ADVANCED PLANT ANATOMY.—The structure of vegetative and reproductive organs of seed plants. Physiological and ecological implications of structure are stressed. Offered in alternate years. Prerequisites: Botany 55 or equivalent. 4 s.h. (w) ASSISTANT PROFESSOR PHILPOTT

216. BOTANICAL MICROTECHNIQUE.—Studies in methods of preparing temporary and permanent microscopical slides; theory of staining; the use of the microscope, especially microscopical measurements; drawing, and photomicrography, botanical photography, and lantern slides. Prerequisite: two semesters of natural science. 4 s.h. (w)
ASSOCIATE PROFESSOR ANDERSON

221. STRUCTURE AND CLASSIFICATION OF FUNGI.—Prerequisite: two semesters of botany. 4 s.h. (w)
PROFESSOR WOLF

222. PHYSIOLOGY AND ECOLOGY OF FUNGI.—Prerequisite: Botany 221 or equivalent. 4 s.h. (w)
PROFESSOR WOLF

225-226. SPECIAL PROBLEMS.—Students with adequate training may do special work in the following fields:

a. BACTERIOLOGY, MYCOLOGY, AND PLANT PATHOLOGY.

PROFESSOR WOLF

b. CYTOLOGY.

ASSOCIATE PROFESSOR ANDERSON

c. ECOLOGY.

PROFESSOR OOSTING AND ASSOCIATE PROFESSOR BILLINGS

d. GENETICS.

ASSOCIATE PROFESSOR PERRY

e. MORPHOLOGY AND ANATOMY OF HIGHER GROUPS.

PROFESSORS HARRAR AND ASSISTANT PROFESSOR PHILPOTT

f. MORPHOLOGY AND TAXONOMY OF LOWER GROUPS.

PROFESSOR BLOMQUIST AND ASSOCIATE PROFESSOR ANDERSON

g. PHYSIOLOGY.

PROFESSOR KRAMER AND ASSOCIATE PROFESSOR NAYLOR

i. TAXONOMY OF HIGHER GROUPS.

PROFESSOR BLOMQUIST

j. SENIOR SEMINAR.—1 s.h. (w)

STAFF

252. ADVANCED PLANT PHYSIOLOGY.—The physicochemical processes and conditions underlying the physiological processes of plants. Prerequisite: Botany 151 or equivalent; organic chemistry recommended. 4 s.h. (E)

ASSOCIATE PROFESSOR NAYLOR

254. PLANT WATER RELATIONS.—A study of factors affecting the availability of water, its absorption and use in plants, and the effects of water deficits on plant processes. Assigned readings, reports, and lectures. Prerequisite: Botany 151 or equivalent. 3 s.h. (w)

PROFESSOR KRAMER

255. ADVANCED TAXONOMY.—A study of the historical background of plant taxonomy, modern concepts and systems of classification, nomenclatorial problems and the taxonomy of specialized groups. Prerequisite: two years of botany, including Botany 52 or equivalent. 4 s.h. (w)

PROFESSOR BLOMQUIST

256. COMMUNITY ANALYSIS AND CLASSIFICATION.—The development of concepts and methods in synecology leading to present applications of theory and field techniques. Prerequisite: Botany 156 or equivalent. 3 s.h. (E)

PROFESSOR OOSTING

257. PRINCIPLES OF PLANT DISTRIBUTION.—Interpretations of floristic and ecological plant geography of world vegetation. Prerequisite: 156 or equivalent. 3 s.h. (E)

ASSOCIATE PROFESSOR BILLINGS

258. PHYSIOLOGY OF GROWTH AND DEVELOPMENT.—Consideration of the internal factors and processes leading to the production of new protoplasm and its differentiation at the cellular, tissue, and organ level in plants. Prerequisite: Botany 151 or equivalent; organic chemistry recommended. 3 s.h. (E)

ASSOCIATE PROFESSOR NAYLOR

259. ENVIRONMENTAL MEASUREMENTS.—Methods of obtaining and evaluating climatological data for ecological purposes with special attention to instrumentation and microclimate. Prerequisite: Botany 151 and 156 or equivalent. 3 s.h. (E)

ASSOCIATE PROFESSOR BILLINGS

FOREST BOTANY

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1, 2. 3 or 4 s.h. (w)

PROFESSOR WOLF

253. DENDROLOGY.—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of botany. 3 s.h. (w) PROFESSOR HARRAR

DEPARTMENTAL MAJOR

Prerequisites: Botany 1 and 2.

Major Requirements: A minimum of 21 hours (B.S., 24 hours) of work including courses 52, 55, and 104. The remaining hours may be selected from any other courses in the Department for which the student is eligible, subject to the approval of the Departmental Adviser. All majors are expected to register for Senior Seminar for one semester of their senior year.

Related Work: Courses in at least two Natural Science Departments sufficient to total, with major work, 42 s.h. (B.S., 48 s.h.).

CHEMISTRY

PROFESSOR HOBBS, CHAIRMAN; PROFESSOR SAYLOR, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSOR HILL, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS BIGELOW, GLOCKER (VISITING LECTURER), GROSS, HAUSER, LONDON AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; MR. BAYLESS AND ASSISTANTS

1-2. GENERAL INORGANIC CHEMISTRY.—Lectures and recitations on the elementary principles of chemistry and on the occurrence, preparation, properties, and uses of the elements and their compounds. The laboratory work includes qualitative analysis of some of the more common metals. One lecture, two recitations, and three laboratory hours, throughout the year. 8 s.h. (w & e)

PROFESSOR HILL; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; MR. BAYLESS AND ASSISTANTS

61 FUNDAMENTALS OF ANALYTICAL CHEMISTRY.—A study of the reactions of electrolytes in solution and of chemical equilibrium illustrated by laboratory experiments involving the techniques of gravimetric, volumetric, and colorimetric analysis. One lecture, one recitation and six laboratory hours. Prerequisites: Chemistry 1-2, and Mathematics 6 or equivalent. 4 s.h. (w)

PROFESSORS SAYLOR AND VOSBURGH; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; AND ASSISTANTS

70. QUANTITATIVE ANALYSIS.—A study of the theory and technique of inorganic gravimetric and volumetric analysis. One lecture, one recitation, and six laboratory hours. Prerequisite: Chemistry 61. 4 s.h. (w)

PROFESSORS SAYLOR AND VOSBURGH; ASSISTANT PROFESSORS KRIGBAUM, STROBEL, AND WILDER; DR. CLEVER; AND ASSISTANTS

131. ADVANCED QUANTITATIVE ANALYSIS.—A second course in the theory and technique of inorganic analysis with special reference to the analysis of complex materials. One lecture and six laboratory hours. Prerequisite: Chemistry 70. 3 s.h. (w)

PROFESSORS VOSBURGH AND SAYLOR AND ASSISTANTS

151-152. ORGANIC CHEMISTRY.—An introduction to the study of the compounds of carbon in which the chemistry of aliphatic and aromatic compounds is considered. Laboratory experiments are selected to illustrate the more important reactions and preparations of organic compounds. Two lectures, one recitation, and three laboratory hours. Prerequisite: Chemistry 61. Course 151 is prerequisite for 152. 8 s.h. (w)

PROFESSORS BIGELOW AND HAUSER; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSOR WILDER; AND ASSISTANTS

206. ELEMENTS OF THEORETICAL CHEMISTRY.—A course in the general principles of physical chemistry for students who do not present credit in calculus. Credit is not given for both 206 and 261-262. Three recitation and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics, 6 s.h. With the permission of the Director of Graduate Studies, graduate students from other departments may offer other advanced science courses in place of some of these prerequisites. 4 s.h. (w)

PROFESSORS SAYLOR AND HOBBS

215-216. **ADVANCED INORGANIC CHEMISTRY.**—A study of modern theories of valence and molecular structure; also of inorganic compounds, particularly the less common types, illustrated by suitable laboratory preparations. Prerequisites: Chemistry 70, 151-152, and 261-262, or 206. 6 s.h. (w)

PROFESSORS VOSBURGH AND HILL; ASSISTANT PROFESSOR STROBEL

233. **INSTRUMENTAL ANALYSIS.**—Experiments in the use of physical measuring instruments in chemical analysis with special attention to optical instruments. One lecture and three laboratory hours. Prerequisites: Chemistry 70 and one year of physics. 2 s.h. (w)

ASSISTANT PROFESSOR STROBEL; PROFESSORS HOBBS, SAYLOR, AND VOSBURGH

234. **PHYSICO-CHEMICAL METHODS OF ANALYSIS.**—Discussion of physico-chemical principles as applied to methods of instrumental analysis, illustrated by laboratory experiments with emphasis on methods involving electrical techniques. One lecture and three laboratory hours. Prerequisites: Chemistry 70 and either 261-262 or 206; either of the latter may be taken concurrently. 2 s.h. (w)

ASSISTANT PROFESSOR STROBEL; PROFESSORS HOBBS, SAYLOR, AND VOSBURGH

251. **QUALITATIVE ORGANIC ANALYSIS.**—Systematic identification of organic compounds, including a study of solubilities and classification reactions. One lecture and six laboratory hours. With permission of the Director of Graduate Studies, graduate students may take three hours of laboratory work instead of six and receive 2 semester hours credit. Prerequisites: Chemistry 70 and 151-152. 3 s.h. (w)

PROFESSOR HAUSER AND ASSISTANTS

252. **ADVANCED ORGANIC PREPARATIONS.**—A laboratory course designed to supplement the student's knowledge of fundamental organic processes by a selected group of laboratory exercises accompanied by oral discussions of techniques and theories pertinent to the experiments. Five hours laboratory and lecture with lectures in alternate weeks. Prerequisite: Chemistry 70 and 151-152. 2 s.h. (w)

ASSOCIATE PROFESSOR BROWN AND PROFESSOR BIGELOW

261-262. **PHYSICAL CHEMISTRY.**—Fundamentals of general theoretical chemistry illustrated by selected laboratory experiments. Two recitations and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics 51-52 or equivalent. 6 s.h.

PROFESSORS HOBBS AND SAYLOR

271. **INTRODUCTION TO RESEARCH.**—Lectures on the use of chemical literature, research methods, recording and publication of results, and other topics. One lecture. 1 s.h. (w)

ASSOCIATE PROFESSOR BROWN

275-276. **RESEARCH.**—The aim of this course is to give instruction in methods used in the investigation of original problems. It is open to seniors by permission of the Director of Undergraduate Studies. Nine hours a week and conferences. 3 or 6 s.h. (w)

PROFESSORS BIGELOW, GROSS, HAUSER, HILL, HOBBS, LONDON, SAYLOR AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHAW AND BROWN;

ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

DEPARTMENTAL MAJOR

A. For the degree of A.B.

Prerequisites: Chemistry 1-2, Mathematics, 6 s.h.

Major Requirements: 22 s.h., including Chemistry 61, 70, 151-152, and an additional 6 or 7 s.h., which may be satisfied by 261-262 or by 206 together with 2 or 3 s.h. selected from courses 131, 233, 234 and 251.

Related Work: 20 s.h., including Physics, 8 s.h., and a total of 12 s.h. additional, usually in Botany, Geology, Mathematics, Physics, or Zoology.

B. For the degree of B.S.

Prerequisites: Chemistry 1-2, Mathematics, 6 s.h.

Major Requirements: Chemistry 61, 70, 131, 151-152, 234, 251, 261-262.

Related Work: 18 s.h., including Physics, 8 or 10 s.h., and Mathematics 50, 51, and 52.

The language requirements must be satisfied by German and either French or Russian.

ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR HOOVER, CHAIRMAN; PROFESSOR DE VYVER, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSORS BLACK, HANNA, HUMPHREY, RATCHFORD, SIMMONS, SMITH, SPENGLER, AND VON BECKERATH; ASSOCIATE PROFESSORS JOERG, LANDON, LEMERT, MANN, SAVILLE, AND SHIELDS; ASSISTANT PROFESSORS CARTIER, DEWEY, DICKENS, AND MCKENZIE; MESSRS. BOWDEN, AND WICKER

The courses offered by the Department are listed under three divisions, Economics, Accounting, and Business Administration.

In general, the Economics courses aim to develop in the student such critical and analytical skills as underlie the ability to understand economic problems and institutions, both in their contemporary and in their historical setting. While no particular vocational or professional goal is emphasized, these courses furnish the academic background necessary for many positions in industry, for work in the economic branches of government service, and for graduate study in economics and the social sciences.

Courses in Accounting and Business Administration, although more concerned with general principles than with specific applications, stress in greater measure than courses in Economics the knowledge and techniques useful to students definitely preparing for business careers. The student who majors in Accounting may elect courses in accountancy, business law, and related work, sufficient to qualify for admission to C.P.A. examinations.

ECONOMICS

51-52. PRINCIPLES OF ECONOMICS.—6 s.h. (E & W)

STAFF

This course must be passed by all students planning to elect further courses in Economics and Business Administration.

Sections of Economics 51 will be offered during the spring semester, and sections of Economics 52 will be offered during the fall semester.

103. TRANSPORTATION.—Essential features, problems, and competitive positions of rail, highway, air, and inland-water transportation, with most emphasis on rail transportation. Special attention is given to the economic significance of transportation, and to cost factors, rates and their economic effects and regulations. 3 s.h. (W)

ASSOCIATE PROFESSOR LANDON

107. CONSERVATION.—A study of the extent and distribution of our natural resources and their service in regional and national development. Emphasis will be placed upon both the natural and human factors involved in the genesis of current problems. Term reports dealing with problems of special interest to those participating will be considered. 3 s.h. (W)

ASSOCIATE PROFESSOR LEMERT

132. THE ECONOMIC HISTORY OF THE UNITED STATES.—A study of the agricultural, industrial, commercial, and financial progress of the United States from colonial times to the present day. 3 s.h. (W)

PROFESSOR SMITH

149. INTERMEDIATE ECONOMICS.—This course develops methods of economic analysis beyond the principles level. Major emphasis is laid on the determination of price and distribution of income. These problems are studied in the context of both competitive and monopolistic market structures. 3 s.h. (W)

STAFF

152. GLOBAL GEOGRAPHY.—The subject matter involves resources patterns and world affairs, geonomic problems, geocultural problems, and geographic factors affecting geopolitical questions. No prerequisite. 3 s.h. (E)

ASSOCIATE PROFESSOR LEMERT

153. MONEY, CREDIT AND BANKING.—This course begins with a study of the nature, characteristics, and functions of money, credit, and the commercial banking system. It covers also the history of commercial banking in the United States; the foundation, organization, and functions of the Federal Reserve System; the supervision and control of commercial banks; deposit insurance; and the value of money. 3 s.h. (W)

PROFESSOR SIMMONS; PROFESSOR RATCHFORD; ASSOCIATE

PROFESSOR SAVILLE; MR. BOWDEN

155. LABOR PROBLEMS.—An examination of present-day labor problems followed by an intensive study of methods used by employers and workers in meeting those problems. 3 s.h. (w) PROFESSOR DE VYVER; ASSISTANT PROFESSOR CARTTER

161. EUROPEAN ECONOMIC PROBLEMS.—This course deals with the losses and economic dislocations of the war, the problem of developing a new pattern of intra-European and world trade, the effort to stabilize prices, expand investments and production, and the effect of economic planning and controls. 3 s.h. (w) PROFESSOR HUMPHREY

169. ECONOMICS OF CONSUMPTION.—Economic problems of the family. Factors determining choice; commercial and legal standards for consumer's goods; consumer credit and co-operation; income and standards of living. 3 s.h. (w) ASSOCIATE PROFESSOR SAVILLE

186. LATIN-AMERICAN ECONOMICS.—Facts and factors in the economic structure and growth of the Latin-American nations; population, labor productivity, and standards of living; problems of industry, agriculture, and mining; transportation and public utilities; monetary and fiscal policies; the migration of capital; economic thought and institutions. 3 s.h. (w) PROFESSOR SMITH

187. PUBLIC FINANCE.—This is a general course in the principles of public finance. It covers the constitutional, economic, and administrative aspects of public revenues, public expenditures, public debts, and intergovernmental fiscal relations. Special attention is given to current trends and problems. 3 s.h. (w) PROFESSOR RATCHFORD

189. BUSINESS AND GOVERNMENT.—An examination of the public policies which most directly affect the operation of competition in the business world. The course considers the leading philosophies of public control and economic development, the validity of their presuppositions, and their influence on legislation, court decisions, and administrative law. 3 s.h. (w) ASSISTANT PROFESSOR DEWEY

193. ECONOMIC SYSTEMS.—A study of alternative economic systems. An analysis of the basic elements of capitalism and of collectivist types of economic systems. Particular attention is given to an analysis of the economic system of Soviet Russia. Credit for this course will be given only if the student takes Economics 194. Prerequisite: permission of the department. 3 s.h. (w) PROFESSOR HOOVER

194. ECONOMIC FUNCTIONS OF THE STATE.—A continuation of Economics 215. A consideration of the economic functions of society and of the contrasting roles of the state in the various economic systems in carrying on these functions. The Nazi system, the quasiosocialized economics of Europe, as well as the modifications of old-style capitalism in the United States are analyzed. Prerequisite: Economics 193. 3 s.h. (w) PROFESSOR HOOVER

201. SENIOR SEMINAR IN ECONOMICS.—Problems in theory and applied economics. Readings, reports, and discussion of selected topics. For majors in Economics, with consent of the Department. 3 s.h. (w) STAFF

204. ADVANCED MONEY AND BANKING.—Structure and functioning of the monetary and banking mechanism. Presupposes a thorough grounding in the field. Particular attention is given to significant areas involving issues of economic policy. Primary emphasis is placed upon the underlying basis of monetary management and upon its implementation by the central banking authorities. 3 s.h. (w) PROFESSOR SIMMONS

217. POPULATION PROBLEMS AND RESOURCES.—Survey of population theory and policy. Study of national and international trends in population—growth and resource-use, together with analyses of their economic and social implications. 3 s.h. (w) PROFESSOR SPENGLER

218. BUSINESS CYCLES.—A study of the various types of cyclical movements in industry, with special emphasis on cycle theory and methods of controlling or modifying business cycles. 3 s.h. (w) PROFESSOR HUMPHREY

219. **ECONOMIC PROBLEMS OF UNDER-DEVELOPED AREAS.**—Consideration and analysis of the economic and related problems of under-developed countries. Some attention will be given to national and international programs designed to accelerate the solution of these problems. 3 s.h. (w) PROFESSOR SPENGLER

231. **ECONOMIC HISTORY OF EUROPE.**—The economic development of Europe from medieval times to the present, treating such topics as the guilds, mercantilism, money, banking, crises, the Industrial Revolution, the interrelationships of government and business, and the economic consequences of war. 3 s.h. (w) PROFESSOR SMITH

233. **STATE AND LOCAL FINANCE.**—A study of expenditures, taxation, and financial administration in state and local governments with emphasis on current problems. Special attention will be given to research methods and materials and to the financial relations between state and local governments. Prerequisite: Economics 187 or consent of instructor. 3 s.h. (w) PROFESSOR RATCHFORD

237-238. **STATISTICAL METHODS.**—A study of statistical methods appropriate for dealing with problems in business and the social sciences. In addition to developing more thoroughly the subjects considered in Business Statistics, the following methods will be considered: simple, multiple, partial, and curvilinear correlation; curve fitting; probability; frequency distributions; and reliability of estimates. Prerequisite: Economics 138 or consent of the instructor. Either semester may be taken for credit. 6 s.h. (w) PROFESSOR HANNA

240. **NATIONAL INCOME.**—A critical survey of the conceptual framework and structure of national income and its components, the reliability of national income estimates, and their use in analyzing questions of economic policy. 3 s.h. (w) PROFESSOR HANNA

241. **VALUE AND DISTRIBUTION.**—This course is a critical survey of the leading contemporary explanations of price formation and of the determination of interest, rent, wages, and profits. 3 s.h. (w) PROFESSOR SPENGLER

243. **MATHEMATICAL ECONOMICS.**—A systematic survey of mathematical economic theory. The principal topics are conditions of static equilibrium, including stability conditions, dynamic models using difference equations, and linear production models of input-output analysis and activity analysis. 3 s.h. (w) ASSISTANT PROFESSOR MCKENZIE

244. **INTRODUCTION TO ECONOMETRICS.**—The theory of statistical model building in economics. The identifiability of parameters in a system of linear difference equations. The statistical estimation of parameters. The design of dynamic economic models. 3 s.h. (w) ASSISTANT PROFESSOR MCKENZIE

245. **PROBLEMS OF MODERN INDUSTRIALISM.**—Description and analysis of the growth of modern industrialism, of the structure and operation of large scale industry, of the inter-relations of industrial, political, and legal development, and of the implications for industry of the modern welfare state. 3 s.h. (w) PROFESSOR VON BECKERATH

256. **LABOR LEGISLATION AND SOCIAL INSURANCE.**—A study of the relations of the state to labor problems with special reference to remedial legislation, to interference in labor disputes, and to social insurance. Prerequisite: Economics 155 or with the consent of the instructor. 3 s.h. (w) PROFESSOR DE VYVER

257. **DYNAMICS OF THE LABOR MOVEMENT.**—A study of the forces which have shaped the growth of the labor movement. Special emphasis on the origin of modern trade unionism, relating its growth with western philosophic developments, and with the changing economic and social structure of society in Europe and America. 3 s.h. (w) ASSISTANT PROFESSOR CARTER

262. **TRADE UNIONISM AND COLLECTIVE BARGAINING.**—An intensive survey of the trade union as an economic institution is followed by a study of the principles and problems of union-management relationship as found in collective bargaining. Prerequisite: Economics 155 or equivalent. 3 s.h. (w) PROFESSOR DE VYVER

265. INTERNATIONAL TRADE AND FINANCE.—A study of the fundamental principles of international trade and foreign exchange. Subjects covered will include international specialization, balance of payments, foreign investments, tariffs and commercial policies, exchange control, exchange rates, and international monetary problems. 3 s.h. (w) PROFESSOR HUMPHREY

268. COMPETITIVE VERSUS MONOPOLISTIC ENTERPRISE.—A study of monopoly and imperfect competition as disturbances of a free, self-regulating market economy in an individualistic democratic political system; of the possibilities of public and private action respecting the preservation of these systems; and of the implications of planning and public welfare policies. 3 s.h. (w)
[Not offered in 1953-54.] PROFESSOR VON BECKERATH

ACCOUNTING

57-58. PRINCIPLES OF ACCOUNTING.—Elementary principles of single proprietorship, partnership, and corporation accounting. Supervised laboratory periods will be assigned. 6 s.h. (w) STAFF

60. GENERAL ACCOUNTING.—A one semester course in accounting principles designed for economics majors and other non-business administration students who desire some understanding of basic accounting concepts. This course must be taken in the sophomore or junior year. Students may not receive credit for both Course 60 and Course 57-58. 3 s.h. (w)

PROFESSOR DE VYVER; ASSOCIATE PROFESSOR LANDON;
ASSISTANT PROFESSOR DICKENS

147. ACCOUNTING FOR CONTROL.—This course traces the ways and means of executive control through statistics and industrial accounting. Emphasis is placed upon controlling business enterprises through cost accounting, financial reports, and other techniques. This course is not open to accounting majors. Prerequisite: Economics 57-58. 3 s.h. (w) ASSOCIATE PROFESSOR JOERG; PROFESSOR BLACK

171-172. ADVANCED ACCOUNTING.—Advanced accounting theory and practice applied to the managerial problems of valuation and operation in corporations, consolidations, mergers, and liquidations. Open to students who have completed Economics 57-58. 6 s.h. (w) ASSOCIATE PROFESSORS SHIELDS AND MANN

173-174. AUDITING, THEORY AND PRACTICE.—This course is primarily concerned with preparing the student to enter public accounting practice, but some attention is given to internal auditing. During the first semester, auditing techniques and methods are studied through the use of an audit practice set. The work of the second semester deals with matters of auditing and accounting policy examined from the standpoints of the supervising accountant, the business manager, and the investor. Prerequisite: Economics 171-172 and the permission of the department. 6 s.h. (w) ASSOCIATE PROFESSOR MANN

175-176. C.P.A. REVIEW.—Thorough practice in classroom to prepare candidates for the Certified Public Accountant examination. The object is to train students to apply accounting principles and to work in classroom under substantially the same conditions as in the examination room. Practical accounting problems, auditing analysis and theory of accounts. Prerequisite: Economics 171-172 and permission of the department. 6 s.h. (w) PROFESSOR BLACK

177. INCOME TAX ACCOUNTING.—A study of the accounting principles involved in the management of business enterprise under the requirements of Federal income tax laws. Practice is given in the preparation of tax returns. Prerequisite: Economics 171-172 or permission of the instructor. 3 s.h. (w)

ASSOCIATE PROFESSOR SHIELDS

178. ACCOUNTING SYSTEMS.—A presentation of the design and use of basic accounting procedures as applied to specialized business needs. Field trips to selected business units will be arranged. Prerequisite: Economics 171-172 and the permission of the department. 3 s.h. (w) ASSISTANT PROFESSOR DICKENS

180. GOVERNMENT ACCOUNTING.—Accounting principles and methods used in the control and administration of governmental units. Emphasis is placed upon state, county, and municipal governments. Prerequisite: Economics 57-58 and permission of the instructor. 3 s.h. (w) ASSOCIATE PROFESSOR SHIELDS

275-276. ADVANCED INDUSTRIAL ACCOUNTING AND MANAGEMENT.—A comprehensive examination of the rationale and techniques of control methods used in industry. Emphasis is laid on a critical evaluation of the practices followed by job-order, process, and standard costing as well as the economics of overhead costs. Prerequisites: Economics 171-172 and permission of the Department. 6 s.h. (w) PROFESSOR BLACK

BUSINESS ADMINISTRATION

11. ECONOMIC GEOGRAPHY.—A course in regional economic geography embracing the study of the world's major geographic regions, their present and potential production of food and raw materials for manufacture, and the relationship between these factors and the development of manufacturing industries, cities, and commerce. Offered both semesters. 3 s.h. (E & W) ASSOCIATE PROFESSOR LEMERT

105. INDUSTRIAL MANAGEMENT.—This course deals primarily with the elements and problems of managing the operations of an industrial firm. Topics treated include the functions and responsibilities of management, qualities required in executives, organization, location, the physical plant, materials control, the planning and control of operations, industrial and market research, personnel, budgeting, purchasing, and records and reports. Offered both semesters. 3 s.h. (w) ASSOCIATE PROFESSORS LANDON AND JOERG

109. THE ECONOMIC GEOGRAPHY OF LATIN AMERICA.—This course involves comprehensive study of the resources and people of Mexico, the West Indies, and Central and South America. Special emphasis is placed upon the possibilities and limitations of increases in trade between the United States and the leading Latin-American countries. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

115. FUNDAMENTALS OF GEOGRAPHY.—A study of geographic influences consisting of location, maps and their interpretation, climate, topography, soils, minerals, bodies of water, plants, animals, and the works of man. This course is required of all students in the Elementary School Teaching program, and is also recommended for those intending to specialize in foreign trade or the diplomatic service. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

116. PRINCIPLES OF ECONOMIC GEOGRAPHY.—A study of the economic resources of the world; the products of the agricultural and manufacturing industries; trade routes and trade centers; and influence of geographic factors on the economic development of nations. This course is recommended for those intending to specialize in foreign trade or the diplomatic service. Prerequisite: Economics 115. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

118. ECONOMIC GEOGRAPHY OF THE SOUTH.—A study of the agricultural, commercial, and industrial development, with special emphasis upon the expansion of Piedmont industries. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

120. ECONOMIC GEOGRAPHY OF THE PACIFIC.—The physical influences, natural resources, and economic activities of Asia, Oceania, and portions of the western coasts of North and South America with special emphasis upon their relationship to present developments. 3 s.h. (E) ASSOCIATE PROFESSOR LEMERT

138. BUSINESS STATISTICS.—A survey of the principal statistical methods and their application to economics and business administration. The course deals with collection of statistical data, construction of statistical tables and charts, and a brief study of the fundamental statistical concepts and techniques. Offered both semesters. 3 s.h. (w) PROFESSOR HANNA; ASSOCIATE PROFESSOR SAVILLE

Open to juniors and to sophomores in the second semester. Not open to seniors except with the permission of the Director of Undergraduate Studies.

143. CORPORATION FINANCE.—Principles and problems in the financial organization of corporations; the study of corporate securities, the management of capital, the distribution of earnings; industrial combinations; insolvency and reorganization. Though not a prerequisite, Economics 57-58, Principles of Accounting, or Economics 60, General Accounting, are recommended to students electing this course. Offered both semesters. 3 s.h. (w)
ASSOCIATE PROFESSOR JOERG

144. INVESTMENTS.—A study of the investment policies of individuals and institutions; the securities markets; sources of investment information and data; the analysis and interpretation of financial statements. Prerequisites: Economics 57-58 or 60, and 143. 3 s.h. (w)
ASSOCIATE PROFESSOR JOERG

158. INSURANCE.—The development and basic principles of insurance. This course covers such topics as business uses, policy contracts, costs, and regulation of insurance. Life and fire insurance are emphasized. Offered both semesters. 3 s.h. (w)
ASSOCIATE PROFESSOR SAVILLE

168. MARKETING.—The topics covered in this course include the economic importance of markets and the marketing system; marketing functions; organization, and methods, price policies; finance; speculation; market research and the planning of marketing activities; co-operative marketing; criticism of marketing and means for improvement; and regulation. 3 s.h. (w)
ASSOCIATE PROFESSOR LANDON

181. BUSINESS LAW.—The fundamental principles of law as applied to routine business transactions. The topics presented are: contracts, negotiable instruments, forms of business organizations. *For seniors.* 3 s.h. (w)
ASSISTANT PROFESSOR DICKENS

182. BUSINESS LAW.—A continuation of 181. The topics presented are: agency, bailments, sales, and related principles. *For seniors.* 3 s.h. (w)
ASSISTANT PROFESSOR DICKENS

184. COMMERCIAL LAW FOR ACCOUNTANTS.—A review and summation of commercial law principles as they apply to accounting theory and practice. Emphasis will be placed upon the commercial law sections of the Certified Public Accountant examinations. Students are admitted to the course by permission of the instructor. *For seniors.* 3 s.h. (w)
PROFESSOR BLACK

188. PERSONNEL MANAGEMENT.—A study of the fundamental principles and problems of labor management and of collective bargaining under modern industrial conditions and under existing labor legislation. 3 s.h. (w)
PROFESSOR DE VYVER

191. BUSINESS POLICY.—An integrating course, where through analysis of a series of case problems from the top management viewpoint, the student is given practice in arriving at effective courses of action to solve business problems. To complete this course satisfactorily the student will be required to draw upon the institutional knowledge and techniques acquired in the other courses in the Department. Prerequisites: Business Administration requirements through the junior year. 3 s.h. (w)
STAFF

DEPARTMENTAL MAJORS

1. ECONOMICS

A. Prerequisites:

1. Students are urged although not required to take Mathematics 5 as partial fulfillment of the Minimum Uniform Requirements in the Natural Sciences and Mathematics.
2. Economics 51-52.

B. Number of hours needed: 24 hours in addition to Economics 51-52.

1. Required courses—Economics 149
Economics 153
2. Electives—18 semester hours of work in Economics (not Accounting or Business Administration) of which 9 semester hours shall be advanced course in the Department.

C. *Related Work:*

1. Number of hours needed: 18 hours.

2. Required courses: one of the following—

Economics 57-58	Principles of Accounting
Economics 60	General Accounting
Economics 138	Business Statistics

3. Departments in which related work is usually taken:

Mathematics, Psychology, the social sciences and Business Administration. In special cases courses taken in other departments may be counted as related work with the approval of the department and the dean.

2. ACCOUNTING

For the requirements for a major in Accounting, see page 93 of this Bulletin.

3. BUSINESS ADMINISTRATION

For the requirements for a major in Business Administration, see page 93 of this Bulletin.

EDUCATION

PROFESSOR CARTWRIGHT, CHAIRMAN; PROFESSOR CARR, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSORS BOLMEIER AND CHILDS; ASSOCIATE PROFESSORS EASLEY, RUDISILL, STUMPF AND WEITZ; ASSISTANT PROFESSORS COLVER, INGLES, JACOBANSKY, MASSEY, MCLENDON, PETTY, RAPPAORT, REYNOLDS, AND ZUKOWSKI; AND ASSISTANTS

Courses in the Department of Education are designed for two groups of students: (1) students with teaching experience or others who have definitely chosen teaching as their life-work, and (2) students who desire to study the school as an outstanding social institution. The courses listed in Nursing Education are for students preparing to teach in schools of nursing.

Students who do not expect to teach but merely desire an understanding of the school as part of a liberal education are advised to elect such courses as 84 and 88 for their introductory work in the Department and then to elect further work in accordance with their special interests. Students who expect to teach in the public schools should plan their courses in accordance with the general regulations set forth under Teaching on page 94 of this catalogue. *All prospective teachers must enroll in courses 84 and 88, preferably beginning before their junior year. They are then required to complete courses 103, 118, and 101-102 or 115-116 in their senior year.*

1. ORIENTATION IN STUDY AND STUDY HABITS.—A course for freshmen whose high-school and other records indicate the need for help in working out satisfactory study methods and in adjusting to college life. Note-taking from reading and lectures, time planning, remedial reading, and pertinent principles of the psychology of learning are among the matters considered. *Either semester. 3 s.h. (w)*

5. DEVELOPMENTAL READING.—A course consisting of study and practice for the improvement of the reading and study skills. Work is provided in such areas as vocabulary, speed of comprehension, critical interpretation, organization of ideas, and versatility of method in reading for different purposes. *3 s.h. (w)*

ASSOCIATE PROFESSOR RUDISILL

84. SOCIAL FOUNDATIONS OF EDUCATION.—This course is the first of four intended to give the student a thorough survey of the place and function of education and an understanding of the school as a social institution. It is an introductory course emphasizing those historical, philosophical, and sociological factors which explain trends in American education. *Either semester. 3 s.h. (w & e)*

PROFESSOR CARTWRIGHT; ASSOCIATE PROFESSOR STUMPF AND ASSISTANT PROFESSOR MCLENDON

NOTE: Courses 84, 88, 103, and 118 constitute a sequence of 12 hours in Education required of all prospective teachers. Students who intend to teach in the elementary school should confer with Professors Carr or Petty and students who

intend to teach in the secondary school should confer with Professors McLendon or Reynolds in order to work this sequence into their schedules. See courses under Nursing Education for modified sequence of courses for students preparing to teach in schools of nursing.

88. EDUCATIONAL PSYCHOLOGY: LEARNING AND MEASUREMENT.—This course and Education 118 constitute a general introduction to the field of Educational Psychology. This course deals with (1) the psychology of learning, including: the nature of the learning process; general principles or laws of learning; the course of learning and forgetting; factors influencing efficiency in learning and retention; and the transfer of training; and (2) measurement, including: the basic concepts in the measurement of intelligence; standardized achievement tests: the extent and significance of individual differences in ability and performance. Opportunity will be afforded for examination and study of a variety of tests of intelligence and achievement. *Either semester. 3 s.h. (E)*

ASSOCIATE PROFESSORS EASLEY AND RUDISILL;
AND ASSISTANT PROFESSOR PETTY

See note following course 84.

101-102. ELEMENTARY EDUCATION: PRINCIPLES AND PRACTICE.—The study of the nature, subject matter, and methods of elementary education. The course is designed to give prospective elementary teachers an understanding of basic principles and practices in the organization of instruction and of subject matter for the primary and grammar grades of the public school. Students may elect primary or grammar-grade work, according to their special interests. The specific problems which arise in the student teachers' experiences are treated in group and individual conferences. *For seniors only. 9 s.h. (E)*

PROFESSOR CARR AND ASSISTANT PROFESSOR PETTY

NOTE: Education 101-102, 103, and 118 constitute a semester's work during the senior year.

103. ORGANIZATION AND MANAGEMENT OF THE SCHOOL.—An introduction to the problems of school organization and administration which are of particular concern to the classroom teacher. Although federal and state control over education is briefly reviewed, the main consideration is the local school system. Considerable attention is given to the administration of teaching personnel, pupil personnel, and the program of studies. *Either semester. 3 s.h. (E)*

PROFESSOR BOLMEIER AND ASSISTANT

See notes following course 84, 101-102, 115-116.

115-116. SECONDARY EDUCATION: PRINCIPLES AND PRACTICE.—A study of the nature, scope, and methods of secondary education, emphasizing fundamentals of the teaching process and exemplifying theory by practice. Students preparing to teach in the junior high school are permitted to concentrate in that field. *Since practice-teaching facilities are limited, students with superior records will be given preference in practice teaching. For seniors only. 9 s.h. (E)*

ASSISTANT PROFESSOR MCLENDON AND ASSISTANTS

NOTE: Education 115-116, 103, and 118 constitute a semester's work during the senior year.

118. EDUCATIONAL PSYCHOLOGY: PSYCHOLOGICAL DEVELOPMENT.—This course traces the psychological development of the individual from infancy to maturity. The principal topics considered are: the interdependence of hereditary and environmental factors in development, the nature of the development process, the establishment of the early basic patterns of behavior, changes and conditions producing these changes throughout childhood and adolescence to maturity, and the origin and treatment of minor behavior disorders. To the degree practicable, students will observe children in typical and atypical situations as a means of securing concrete data on the problems treated in the course. Not open to students who have had Psychology 121 or 126. Prerequisite: three semester hours in psychology or educational psychology. *Either semester. 3 s.h. (E)*

ASSOCIATE PROFESSOR EASLEY

See notes following course 84, 101-102, 115-116.

142. CHILDREN'S LITERATURE.—Students enrolled will be allowed to specialize in literature of either the primary or the grammar grades. 3 s.h. (E)

PROFESSOR CARR AND ASSOCIATE PROFESSOR RUDISILL

161. INTEGRATED ART IN THE PUBLIC SCHOOL.—This course consists of three semester hours of work in materials and methods. (Required of all students intending to teach in the elementary school.) *For juniors and seniors.* 3 s.h. (E)

MR. STARS

162. PLASTIC ART IN THE PUBLIC SCHOOL.—Basic sculpture and ceramics for students in elementary and secondary art education. This course will provide credit towards the North Carolina Elementary or Secondary Teaching Certificate. 3 s.h. (E)

MR. STARS

164. VOCAL MUSIC IN THE PUBLIC SCHOOL.—Materials and methods of teaching vocal music in the junior and senior high schools; emphasis on organization, administration, and performance of school choirs and ensembles; care of the changing voice. 3 s.h. (E)

ASSISTANT PROFESSOR SAVILLE

166. INSTRUMENTAL MUSIC IN THE PUBLIC SCHOOL.—Materials and methods of teaching instrumental music in the junior and senior high schools; emphasis on teaching technics, repertoire, organization, and administration of the instrumental curriculum. 3 s.h. (E)

ASSOCIATE PROFESSOR BONE

201. TEACHING AND SUPERVISION OF ARITHMETIC.—Special attention is given to the number system, the fundamental operations (with whole numbers, fractions, and decimals), percentage, and measurements. Considered also are the meaning theory, methods of teaching, problem solving, evaluation, practice and drill, and selection and gradation of arithmetical contents. The course is designed for teachers and supervisors in the elementary school. 3 s.h. (E)

ASSISTANT PROFESSOR PETTY

203. PRINCIPLES OF SCHOOL ADMINISTRATION.—The fundamental facts and procedures of school administration, an analysis of the problems and policies of the organization and direction of a local school system and the functions of the various school officials. Prerequisite: six semester hours in education. 3 s.h. (E)

PROFESSOR BOLMEIER

205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION.—A consideration of the aims and objectives of secondary school subjects, emphasizing practical problems of curriculum-making in the high school. 3 s.h. (E)

PROFESSOR CHILDS

208A. MENTAL TESTS AND APPLICATIONS.—A study of the development of intelligence testing, the concept of general intelligence, various recent applications of mental tests and training in the giving of individual tests. Prerequisite: course 258 or six semester hours of other work in educational psychology or psychology. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

208B. MENTAL TESTS AND APPLICATIONS.—A continuation of course 208A intended to provide experience in the administration of mental tests and in the interpretation of data. Open only to students approved by the instructor. 2 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

209. STATISTICAL METHODS APPLIED TO EDUCATION.—A study of statistical methods of treating educational and social data designed to enable teacher or administrator to interpret and use the results of scientific investigations in education. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

213. PROBLEMS IN THE ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL.—A study of the work of the elementary school principal. 3 s.h. (E)

215. EDUCATIONAL AND VOCATIONAL GUIDANCE.—A survey of the literature on guidance with special reference to secondary education; a critical study of the principles and techniques used in guidance; an attempt to locate the problems most urgently in need of solution. Prerequisite: 12 semester hours in the Department. 3 s.h. (E)

PROFESSOR CHILDS

224. TEACHING THE SOCIAL STUDIES IN ELEMENTARY SCHOOLS.—

This course treats objectives, curriculum trends, methods, and materials in elementary-school social studies. Topics receiving emphasis include unit-planning, use of textbook, the reading program, the using of community resources, audio-visual materials, dealing with controversial issues, teaching time and place concepts, and evolution. Opportunity is provided for teachers to work on their own school problems in the social studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

225. THE TEACHING OF HISTORY AND THE SOCIAL STUDIES.—

Evaluation of the objectives, content, materials, and methods in the teaching of History and the Social Studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

226. TEACHING READING IN THE ELEMENTARY SCHOOL.—

A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. Practice is provided with elementary-school children suffering reading retardation, in testing, diagnosis, and daily remedial teaching. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

227. THE PSYCHOLOGY OF LEARNING: PROBLEMS.—

The major problems related to the learning process will be examined with the experimental literature bearing on them. The curves of learning and forgetting, the distribution of practice, economical methods of learning, and the transfer of training will be the major topics considered. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

[Not offered in 1954-55]

232. SUPERVISION OF INSTRUCTION.—

A survey of supervision as a means of improving instruction and adapting the curriculum to the learner and to community needs. 3 s.h. (E)

PROFESSOR CARR

234. SECONDARY-SCHOOL ORGANIZATION AND ADMINISTRATION.—

This course is designed especially for principals, teachers, and other prospective members of the secondary-school staff. The scope of secondary education is considered to encompass junior high school, regular high school, senior high, and junior college. Special treatment is given to the problems of internal organization and management. 3 s.h. (E)

PROFESSOR BOLMEIER

236. TEACHING READING IN THE SECONDARY SCHOOL.—

A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. Practice is provided with secondary-school children suffering reading retardation, in testing, diagnosis, and daily remedial teaching. For secondary-school teachers of all subjects who wish to improve the reading and study habits of their students. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

246. THE TEACHING OF MATHEMATICS.—

This course deals with such topics as aims, curriculum, course and lesson planning, and classroom procedure for teaching secondary-school mathematics. 3 s.h. (E)

ASSISTANT PROFESSOR REYNOLDS

253. SCHOOL LAW.—

The primary purpose of this course is to familiarize prospective school administrators and teachers with the legal features of school organization and administration. Although some attention is given to constitutional and statutory provisions, the main emphasis is upon court decisions relating to education. Students are expected to select appropriate problems in school law for intensive study. 3 s.h. (E)

PROFESSOR BOLMEIER

255. GUIDANCE FUNCTIONS OF THE CLASSROOM TEACHER.—

A consideration of the philosophy, methods and tools of guidance appropriate to the classroom teacher. This course is designed for students who do not plan to become guidance specialists, but who wish to apply the principles and techniques of guidance. Prerequisites: twelve hours in either education or psychology, or a combination of the two. 3 s.h. (E)

ASSOCIATE PROFESSOR WEITZ

258. EDUCATIONAL MEASUREMENTS.—

A critical study of the principles and techniques involved in measurement in education with opportunity for individual research. Prerequisite: 12 semester hours in the Department, including a course in educational psychology. 3 s.h. (E)

ASSOCIATE PROFESSOR WEITZ

267. **THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL.**—This course deals with such topics as aims and values, curriculum materials, classroom and laboratory procedures, field trips, lesson planning, and grade placement for science teaching in the elementary school. 3 s.h. (E) ASSISTANT PROFESSOR REYNOLDS

276. **THE TEACHING OF HIGH-SCHOOL SCIENCE.**—Discussion, lectures and collateral reading, related to such topics as aims, tests, curriculum, classroom and laboratory procedure, field trips, course and lesson planning for secondary-school science. 3 s.h. (E) ASSISTANT PROFESSOR REYNOLDS

290. **ADMINISTRATION OF SCHOOL PROPERTY.**—Planning and management of the school plant and its equipment to meet instructional, health, and community needs for immediate and long-range purposes. This course is intended for teachers and principals as well as for superintendents. Areas to be treated include site selection; trends in design, lighting, ventilation and heating; custodial service and maintenance; and financing. 3 s.h. (E) ASSOCIATE PROFESSOR STUMPF

NURSING EDUCATION

Students preparing for administrative, teaching, or supervisory positions in schools of nursing must take, in addition to other courses, substantially the same basic program of work in Education as do prospective secondary school teachers, namely, courses 84, 88, 103, 115-116, and 118. Course 101N below is substituted for course 103 in this program. Courses 84N and 115N-116N are sections of courses 84 and 115-116, respectively, designed especially for nurses.

84N. **SOCIAL FOUNDATIONS OF NURSING EDUCATION.**—A special section of Education 84, applied to Nursing Education. A survey of major historical, philosophical, and sociological factors which have affected developments in nursing and nursing education. The purpose of the course is to give the student a better understanding of the place of nursing in present day society and the responsibilities of the individual nurse toward that society. 3 s.h. (w) ASSISTANT PROFESSOR RAPPAPORT

101N. **THE CURRICULUM IN THE SCHOOL OF NURSING.**—The general principles of curriculum making and the factors which determine the content and organization of the nursing school curriculum are considered in this course. 3 s.h. (w) ASSISTANT PROFESSOR INGLES

115N-116N. **NURSING EDUCATION: PRINCIPLES AND PRACTICE.**—A special section of Education 115-116. Principles of teaching applied to the nursing school situations and the planning and evaluation of instruction. Ninety hours of observation and of supervised teaching in the Duke University School of Nursing are required. Four hours of conference, observation, and practice teaching are required each week. Before beginning practice teaching students must complete thirty hours of observation. 8 s.h. (w) ASSISTANT PROFESSOR RAPPAPORT

[Not open to students who have had course 115-116.]

117N. **COMMUNITY NURSING SERVICE.**—Designed for administrators, teachers, and supervisors in schools of nursing. Emphasis is on the integration of out-patient departments and community social and health agencies into the nursing school curriculum and on the preparation of nurses for community service. 3 s.h. (w) ASSISTANT PROFESSOR MASSEY

120N. **NURSING EDUCATION: PROBLEMS IN NURSING CARE.**—Each student works on an individual problem designed to improve the nursing care of patients. 3 s.h. (w) ASSISTANT PROFESSORS INGLES AND ZUKOWSKI

124N. **NURSING EDUCATION: TEACHING OF THE NURSING ARTS.**—In this course an effort is made to help prospective teachers to integrate the facts and principles of the natural, social, and medical sciences into the teaching of nursing arts. Though major emphasis is placed upon problems which are involved in teaching the first course, the concept of the nursing arts as an integral part of each clinical area is stressed. 3 s.h. (w) STAFF

130N. PSYCHOSOMATIC NURSING.—A study of the close relationship between mind and body in all illness, and of the techniques of observation and interview, both experimental and therapeutic. Lectures, clinics, conferences, discussions and experience with patients. 4 s.h. (w)
ASSISTANT PROFESSOR ZUKOWSKI

131N-132N. PSYCHIATRY AND PSYCHIATRIC NURSING.—An advanced study with special emphasis on personality development and the preventive and therapeutic aspects of psychiatry and psychiatric nursing. In the second semester the management of practical situations of increasing complexity is stressed. Lectures, clinics, conferences, discussions and experience with patients. 8 s.h. (w)
ASSISTANT PROFESSOR ZUKOWSKI

133N. SEMINAR IN PSYCHIATRIC NURSING.—Special study of areas such as behavior problems of children, projective tests, group therapy, mental hygiene clinics, etc. 3 s.h. (w)
ASSISTANT PROFESSOR ZUKOWSKI

134N-135N. ADVANCED MEDICAL AND SURGICAL NURSING.—A study of the medical and surgical aspects of selected diseases, aimed at giving the student a better comprehension of the total care necessary to bring about the best possible results for patients. Lectures, discussions, case histories, and planned observation and experience with patients. 8 s.h. (w)
ASSISTANT PROFESSOR INGLES

136N. SEMINAR IN MEDICAL OR SURGICAL SPECIALTY.—Directed study in a selected medical or surgical specialty. Each student works on a problem of major interest to her. Individual research in the collection of original material. 3 s.h. (w)
ASSISTANT PROFESSOR INGLES

192N. PRINCIPLES AND METHODS OF TEACHING IN SCHOOLS OF NURSING.—The primary purpose of this course is to help teachers in schools of nursing to understand and to utilize generally accepted principles of learning and to carry out a more effective teaching program in a school of nursing. Instruction is given in the planning of courses, in methods of teaching in classrooms and in hospital divisions, in construction of examinations, and in the utilization of other methods of determining the effectiveness of a teaching program. 3 s.h.
ASSISTANT PROFESSOR RAPPAPORT

193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better to understand their functions in planning and managing a program on a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel, and a more adequate teaching program for students and others. 3 s.h. (w)
ASSISTANT PROFESSOR INGLES

195N. PERSONNEL WORK IN SCHOOLS OF NURSING.—The primary purpose of this course is to help head nurses and supervisors to develop greater understanding of the principles of human behavior and greater ability to apply these principles in working with patients and others on hospital divisions, and in establishing cooperative relationships with other departments of the hospital. 3 s.h. (w)
ASSISTANT PROFESSOR JACOBANSKY

DEPARTMENTAL MAJOR

Major Requirements: 1. Number of hours needed; 24 hours in the Department. 2. Required courses: 84, 88, 103, 118. 3. Recommended courses: for elementary teachers, Education 101-102, 142. For secondary teachers, Education 115-116 and materials and methods in teaching of related work.

Related Work: Sufficient work in subjects to be taught to meet certification requirements in state in which student intends to teach.

MATERIALS AND METHODS COURSES

Certain courses concerned with materials and methods in teaching the various subjects in the public school curriculum are listed in the proper subject matter department. These courses are intended to give credit on teaching certificates and are recommended by the Department of Education for such credit.

ENGLISH

PROFESSOR IRVING, CHAIRMAN; ASSOCIATE PROFESSOR BEVINGTON, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR BOWMAN, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS BAUM, BLACKBURN, BOYCE, BRINKLEY, GILBERT, GOHDES, HUBBELL, SANDERS, TURNER, AND WARD; ASSOCIATE PROFESSORS MITCHELL, PATTON, AND REARDON; ASSISTANT PROFESSORS BEVINGTON, BUDD, HARWELL, JORDAN, POTEAT, SCHWERMANN, SUGDEN, WETHERBY, WHITE, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MESSRS. BROOKS, HOLMES, KEIRCE, MAJOR, MICHALAK, MULDER, NEWELL AND PADGETT

L. ENGLISH FUNDAMENTALS.—All freshmen whose scores on the placement tests indicate that they are not ready for English 1 must take this course. Students who fail in English L must repeat the course. Students who have earned credit in English L must also take English 1 and 2. 3 s.h. (w)

ASSISTANT PROFESSOR JORDAN AND MR. NEWELL

1-2. ENGLISH COMPOSITION.—All freshmen are required to take course 1 and course 2. (For exemptions, see Uniform Course Requirements, p. 91.)

Students who fail in English 1 or 2 must repeat the course in the following semester. Students in courses 1 and 2 who fail to make an average of "C" or better are strongly advised to earn credit for an additional course in English composition. 6 s.h. (E & w)

PROFESSOR WARD; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, BUDD, HARWELL, JORDAN, POTEAT, SUGDEN, WHITE, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MESSRS. BROOKS, HOLMES, KEIRCE, MAJOR, MULDER, NEWELL, AND PADGETT

33. WRITING LABORATORY.—A non-credit course in elementary composition which may be elected by students who need it, or may be required of certain students under the conditions stated on page 89, "Deficiencies in Composition." Students may enter or leave this course at any time, at the instructor's discretion. (w)

ASSISTANT PROFESSORS HARWELL AND JORDAN

53. ENGLISH COMPOSITION.—A course in advanced composition and grammar. Emphasis is placed first on the student's mastering the fundamental principles of English grammar and the other essentials of correct writing. Weekly themes are required. 3 s.h. (w)

ASSISTANT PROFESSOR JORDAN

65-66. ENGLISH COMPOSITION.—A foundation course in imaginative writing, both prose and verse. Open to sophomores and in special cases to freshmen. The consent of the instructor is required. 6 s.h. (E)

PROFESSOR SANDERS

E-93. ADVANCED COMPOSITION FOR ENGINEERS.—This course concentrates on those forms of writing most needed by men in technical fields, especially engineers. Among other types of writing, it includes business letters, technical reports, and semi-technical articles. Open to non-engineering students only upon consent of the instructor. Prerequisite: English 1 and 2. 3 s.h. (w)

ASSISTANT PROFESSOR HARWELL AND MR. HOLMES

101-102. EXPOSITORY ENGLISH COMPOSITION.—The course attempts to encourage fluency and accuracy in expository expression. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 6 s.h. (E)

ASSOCIATE PROFESSOR MITCHELL

103-104. ENGLISH COMPOSITION.—A course in descriptive and narrative writing. Class discussion of students' manuscripts, supplemented by a critical evaluation of a few selected short stories and by individual conferences with the instructor. Open to sophomores, juniors, and seniors. The consent of the instructor should be secured as early as possible in the spring semester. Prerequisites for English 104: English 103. 6 s.h. (E)

PROFESSOR BLACKBURN AND DR. BOWERS

107-108. JOURNALISM.—The first semester is devoted to news-writing and copy-reading; the second semester to the writing of feature articles and editorials. 6 s.h. (w)

ASSISTANT PROFESSOR SUGDEN

SPEECH AND DRAMA

118. PERSUASIVE SPEAKING.—The psychological and sociological techniques used in gaining acceptance of ideas through speech. Study is made of the factors influencing human behavior; audience analysis and motivation; choice, arrangement, and adaptation of material. Extensive practice in persuasive speaking. Prerequisite: English 151 or consent of the instructor. 3 s.h. (w) ASSISTANT PROFESSOR WETHERBY

119. HISTORY OF THE THEATRE.—The origin and development of drama, acting, and stagecraft from ancient Greece to the modern European and American theatre. Production problems of representative plays of the various periods will be discussed. Primarily for juniors and seniors, open also to sophomores approved by the instructor. 3 s.h. (E) ASSOCIATE PROFESSOR REARDON

121. STAGECRAFT.—An introductory course on the technical aspects of play production: scenery, lighting, properties, make-up, and costuming. Lectures and laboratory. Laboratory work will be coordinated with the various productions of the Duke Players. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 3 s.h. (E)

ASSOCIATE PROFESSOR REARDON AND MR. MICHALAK

122. PLAY PRODUCTION.—An introduction to the methods of producing a play: theatre organization, play selection, casting, and rehearsal. Lectures and laboratory. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 3 s.h. (E) ASSOCIATE PROFESSOR REARDON AND MR. MICHALAK

139. THE SPEAKING VOICE.—The correction of minor functional speech disorders. The speech organs and their function. The International Phonetic Alphabet and its use. Drill in pronunciation, diction, vocal quality. Primarily for sophomores, juniors, and seniors; also open to freshmen with the consent of the instructor. 3 s.h. (E & W) ASSISTANT PROFESSORS SCHWERMAN AND WETHERBY

[Offered both semesters]

150. ORAL INTERPRETATION OF LITERATURE.—A study of poetry and certain types of prose, with practice in the technique by which they may be communicated to an audience. 3 s.h. (w) ASSISTANT PROFESSOR SCHWERMAN

151. ESSENTIALS OF PUBLIC SPEAKING.—A basic course in public speaking, designed to give the student the poise and confidence necessary to think and speak freely before an audience. Particular attention is paid to the gathering and organization of speech materials and to oral presentation. 3 s.h. (E & W)

ASSOCIATE PROFESSOR REARDON; ASSISTANT PROFESSORS SCHWERMAN,

[Offered both semesters]

AND WETHERBY; MR. MICHALAK

152. ARGUMENTATION.—The principles of argumentation and debating. The techniques of analysis, investigation, evidence, reasoning, brief making, and refutation. Participation in class discussions and debates. Prerequisite: English 151 or consent of the instructor. 3 s.h. (w) ASSISTANT PROFESSOR WETHERBY

[Offered in the fall semester]

171, 172. RADIO BROADCASTING.—The theory and practice of radio broadcasting. The purpose, preparation, and production of various types of radio programs. There will be experience before a microphone in a studio situation. Laboratory work both semesters. Primarily for juniors and seniors; open also to sophomores approved by the instructor. 6 s.h. (w)

ASSISTANT PROFESSOR WETHERBY AND MR. MICHALAK

ENGLISH AND AMERICAN LITERATURE AND LANGUAGE

55, 56. REPRESENTATIVE WRITERS.—The following works are studied in the first semester: Chaucer's Prologue to *The Canterbury Tales* and at least two tales, Shakespeare's *I Henry IV*, *King Lear*, and one other play, the English Bible (selections), Milton's *Paradise Lost* (selections) and some of the shorter poems; in the second semester: Pope's poems (selections), Fielding's *Joseph Andrews* or *Tom Jones*, selections from Keats's or Wordsworth's poems, selections from Browning's or Arnold's poems, Thackeray's *Vanity Fair* or Hardy's *The Mayor of Casterbridge*,

selections from Yeats's poems, two plays by Shaw or a twentieth-century British or American novel. 6 s.h. (E & W)

PROFESSORS BLACKBURN, BOYCE, SANDERS, AND TURNER; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, POTEAT, SUDGEN, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MR. MULDER

111, 112. EIGHTEENTH-CENTURY LITERATURE.—A study of the leading English poets, essayists, dramatists, and novelists from Swift to Blake, with the literary and social background. The major writers studied in the first term are Pope, Swift, Fielding, and Thomson; in the second term, Johnson, Goldsmith, Cowper, and Blake. Tests, discussions, and reports on outside readings. 6 s.h. (E)

PROFESSOR BOYCE

117. MILTON.—Milton's poetry and prose, together with their relation to the period and to other great works of literature. Lectures, discussion, occasional tests, one or two papers. 3 s.h. (E)

PROFESSOR BRINKLEY

123, 124. SHAKESPEARE.—In the first semester twelve plays, before 1600; in the second semester ten plays, after 1600. Occasional tests and one or two papers. 6 s.h. (E & W)

PROFESSORS BOYCE AND WARD; ASSOCIATE PROFESSOR BOWMAN; DR. FRASER

125, 126. ENGLISH LITERATURE, 1789-1832.—The course begins with selections from the poetry of the forerunners of Romanticism. The chief emphasis in the first semester is on the work of the older Romantics: Wordsworth, Coleridge, Southey, Scott, and Lamb. In the second semester the chief emphasis is on the work of the younger Romantics: Byron, Shelley, Keats, Leigh Hunt, Hazlitt, and DeQuincey. Informal lectures and class discussion of assigned texts. A limited amount of outside reading is required and also some memory work. There are four tests each semester. 6 s.h. (E & W)

ASSOCIATE PROFESSORS BEVINGTON AND PATTON; MR. BROOKS

129, 130. ENGLISH NOVEL.—The work of the first semester covers the history of the novel through Scott; that of the second semester, from Dickens through Hardy. Lectures and book reports. 6 s.h. (E)

ASSOCIATE PROFESSOR MITCHELL

131, 132. ENGLISH LITERATURE, 1832-1900.—A study of the chief English writers of poetry, prose, and drama from Carlyle to Yeats. The major writers studied in the first semester are Carlyle, Tennyson, Browning, Macaulay, Mill, Newman, and Arnold; in the second semester, Ruskin, the Rossettis, Morris, Swinburne, Shaw, and Yeats, with selections from minor writers. Collateral reading from novels of the period. Lectures, discussions, tests, and a term paper. 6 s.h. (E & W)

PROFESSOR SANDERS AND ASSOCIATE PROFESSOR BEVINGTON

134. CONTEMPORARY POETRY.—A reading course in the poetry of the twentieth century in England, Ireland, and America, beginning with Gerard Manley Hopkins, and William Butler Yeats. An anthology of modern poetry is read and discussed, supplemented by the wider reading of individual poets. Informal lectures and discussions with a critical paper for the term. Open to juniors and seniors, and occasionally to sophomores by special permission. 3 s.h. (E)

ASSISTANT PROFESSOR BEVINGTON

137, 138. AMERICAN LITERATURE.—A survey of American literature from colonial times to the present. Selections from the works of important authors are read, from Cotton Mather to Eugene O'Neill, and complete novels by Hawthorne, Melville, James, Howells, and others. The work of the first semester ends with the Civil War period. Lectures, monthly tests, and a term paper each semester. 6 s.h. (E & W)

PROFESSORS GOHDES, HUBBELL, AND TURNER; ASSISTANT PROFESSOR BUDD; VISITING LECTURER WOODRESS

141. CHAUCER.—*The Canterbury Tales* and the minor poems, with attention to their literary, social, and religious background. Lectures, discussions and reports. 3 s.h. (W)

DR. KOTTLER

142. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL ENGLISH.—A course in the materials and methods of teaching high school English, planned by the Southern Association of Colleges and Secondary Schools, for the purpose of familiarizing prospective teachers with both the subject matter and the methods of teaching. 3 s.h. (E) ASSISTANT PROFESSOR JORDAN

143, 144. ENGLISH LITERATURE: ELIZABETHAN AND EARLY SEVENTEENTH CENTURY.—A study of the prose, poetry, and drama of the period. First semester: the emphasis in prose is on Sidney; in poetry, on Spenser and Shakespeare; in drama, on Marlowe and Jonson. Second semester: the emphasis in prose is on the English Bible, Bacon, Browne; in poetry, on Donne and on the early poems of Milton; in drama, on Webster and Ford. Lectures, tests, and one or two brief papers. 6 s.h. (E) PROFESSOR BLACKBURN AND ASSISTANT PROFESSOR WILLIAMS

153, 154. COMPARATIVE LITERATURE.—Important works in European literature are read in translation and related to similar documents in English literature. In the first semester are read: nine Greek tragedies, five of Plato's *Dialogues*, Vergil's *Aeneid*, Dante's *Inferno*, and Cellini's *Autobiography*; in the second semester, Machiavelli, Cervantes, Molière, Voltaire's *Candide*, Goethe's *Faust*, Dostoevski's *The Brothers Karamazov*, Ibsen's plays. Discussions, tests, reports. 6 s.h. (E) PROFESSOR IRVING

155. MODERN EUROPEAN DRAMA.—The emphasis is on Ibsen, Strindberg, and Chekhov, and on the Free Theatre movements. Some quite recent plays will also be studied. 3 s.h. (E) ASSISTANT PROFESSOR WHITE

156. MODERN BRITISH AND AMERICAN DRAMA.—Types of drama are studied in relation to European origins and to contemporary scene. The students subscribe to *Theatre Arts*. 3 s.h. (E) ASSISTANT PROFESSOR WHITE

158. CONTEMPORARY FICTION.—Wide reading in twentieth-century novels, with special attention to innovations in form and technique. Lectures, discussions, and weekly critical reports. 3 s.h. (w) DR. SMITH

160. ENGLISH LITERARY BIOGRAPHY.—A reading course in great biographies. Studied are works of Plutarch, Walton, Johnson, Southey, Lockhart, Henry Adams, and Strachey. Lectures, discussions, reports, tests. 3 s.h. (E) PROFESSOR SANDERS

161, 162. MODERN ENGLISH AND ITS BACKGROUNDS.—An elementary historical and descriptive study of the English language: patterns of change and growth, standards of usage and pronunciation. Some attention is given to the methods of linguistic inquiry and to the relations of philology to literary studies. The first semester is devoted chiefly to a historical study of written and spoken English, the second to a description of modern American English. Lectures, discussions, and short reports. 6 s.h. (E) DR. KOTLER

165. AMERICAN FICTION.—A survey of fiction in America from its beginnings to 1870, with emphasis on the development of the short story. Lectures, discussions, and frequent written reports. 3 s.h. (E) ASSISTANT PROFESSOR BUDD

166. AMERICAN FICTION.—A survey of fiction in America from 1870 to the present, with emphasis on the local color movement and the rise of realism. Lectures, discussions, and frequent written reports. 3 s.h. (E) ASSISTANT PROFESSOR BUDD

FOR SENIORS AND GRADUATES

201-202. ANGLO-SAXON.—In the first semester, an introduction to the language, with the reading of selected prose and of some of the shorter poems; in the second semester, the *Beowulf*. 6 s.h. (w) PROFESSOR BAUM

203-204. CHAUCER.—Reading and interpretation of the text: in the first semester the principal *Canterbury Tales*; in the second, the *Troilus* and the minor poems. A reading report and a term paper. 6 s.h. (w) PROFESSOR BAUM

205-206. MIDDLE ENGLISH.—Close study of selected texts, with attention to the development of the language and to the history of the literature from 1200 to 1400. A term paper each semester. 6 s.h. (w) PROFESSOR BAUM
[Not offered in 1954-55]

215, 216. ELIZABETHAN DRAMA.—Careful study of one or two major dramatists (Jonson or Beaumont and Fletcher) and extensive reading in the other writers (Heywood, Ford, Massinger, Marlowe, Middleton) with emphasis on the nature and qualities of their work in relation to its historical background. Exposition of plays, reports, and a term paper each semester. 6 s.h. (w) PROFESSOR GILBERT

217. MILTON.—Milton's poetry and prose, with emphasis on the major poems. 3 s.h. (w) PROFESSOR GILBERT
[Not offered in 1954-55]

218. SPENSER.—The reading of Spenser's works, with chief attention to *The Faerie Queene*. 3 s.h. (w) PROFESSOR GILBERT

219, 220. THE EIGHTEENTH CENTURY.—Swift, Pope, Defoe, Addison, Steele, and others are studied in the first semester; in the second, Gray, Johnson, Boswell, Goldsmith, the letter writers, and the early Romantic poets. Lectures, oral reports, and a term paper each semester. 6 s.h. (w) PROFESSOR IRVING

221, 222. ENGLISH LITERATURE OF THE EARLY NINETEENTH CENTURY.—A survey of the principal writers and literary monuments from 1798 to 1830; in the first semester chiefly Wordsworth, Coleridge, and Lamb; in the second, Shelley, Byron, Keats, and Hazlitt. Occasional lectures, frequent classroom discussions of reading assignments, written and oral reports, and a term paper each semester. 6 s.h. (w)

[Not offered in 1954-55]

223, 224. ENGLISH LITERATURE OF THE LATER NINETEENTH CENTURY.—Some of the most important works of the period are discussed; the background is filled in by lectures and assigned reading. The first semester is devoted chiefly to Carlyle, Dickens, Thackeray, Tennyson, and Browning; the second semester to Arnold, Ruskin, Pater, George Eliot, Meredith, the Pre-Raphaelites, and Swinburne. A term paper each semester. 6 s.h. (w) PROFESSOR BAUM

[Not offered in 1954-55]

227. LITERARY CRITICISM.—A study of the Greek and Roman critics, in chronological order but with emphasis on their permanent value rather than on the mere history; also the Continental and English critics to about 1700. Lectures, reports, and a term paper. 3 s.h. (w) PROFESSOR GILBERT

229, 230. AMERICAN LITERATURE, 1800-1870.—The writers emphasized in the first semester are Emerson, Thoreau, and Hawthorne; in the second semester, Poe and Melville. In the first semester some attention is given also to Edwards, Franklin, Bryant, Longfellow, Holmes, Whittier, Lowell, and Parkman; and in the second semester, to Byrd, Jefferson, Paine, Freneau, Brown, Irving, Cooper, Kennedy, Simms, Timrod, and Lincoln. An oral report and a term paper in the first semester. 6 s.h. (E) PROFESSORS HUBBELL AND TURNER

231. EMERSON.—A study of Emerson's ideas as reflected in selected examples of his essays and poems. 3 s.h. PROFESSOR GOHDES

232. WHITMAN.—A detailed study of *Leaves of Grass* and of selected prose works. One test and one term paper. 3 s.h. (E) PROFESSOR GOHDES
[Not offered in 1954-55]

233. AMERICAN LITERATURE 1870-1900.—Selected works of the chief authors of the period, including Whitman, Lanier, Mark Twain, James, Howells, Crane, and Emily Dickinson. The lectures will deal with the social background as well as the literary trends and the careers of the major authors. One test and one term paper. 3 s.h. PROFESSOR TURNER

234. **AMERICAN LITERATURE OF THE TWENTIETH CENTURY.**—Selected works of representative authors, including Dreiser, Edith Wharton, Mencken, Lewis, Willa Cather, O'Neill, Robinson, Frost, Eliot, Hemingway, and Faulkner. The lectures will deal primarily with literary trends as shaped by the social background. One test and one term paper. 3 s.h. PROFESSOR GOHDES

239. **SHAKESPEARE.**—A study of the plays and poems, with attention to sources, earlier criticism, and the work of Shakespeare's contemporaries. 3 s.h. (w)
[Not offered in 1954-55] PROFESSOR GILBERT

245. **THE EIGHTEENTH-CENTURY NOVEL.**—Richardson, Fielding, Smollett, and Sterne are emphasized. Some attention is given to earlier prose fiction and to other contributing literary patterns. Lectures and short papers. 3 s.h. (w)
PROFESSOR BOYCE

251, 252. **ENGLISH LITERATURE IN THE SEVENTEENTH CENTURY.**—A survey course. The major works in prose, poetry, and drama from 1600 to the death of Dryden. Lectures, reports, and term papers. 6 s.h. (w)
PROFESSOR WARD

269, 270. **SOUTHERN LITERATURE.**—The principal writers discussed during the first semester are Byrd, Jefferson, Wirt, Kennedy, the Cooke brothers, Legaré, Simms, Timrod, Hayne, Longstreet and other humorists, and the poets of the Civil War. Considerable attention is paid to the historical and cultural background and to Northern and British authors who wrote about the South. An oral report and a term paper are required each semester. 6 s.h. (w)
[Not offered in 1954-55] PROFESSOR HUBBELL

274. **AMERICAN HUMOR.**—The development of the native tradition in the Down-East humorists and the humorists of the Old Southwest. Extensive reading in Mark Twain and his contemporaries, and some attention to the continuation of the tradition after Mark Twain. 3 s.h.
[Not offered in 1954-55] PROFESSOR TURNER

DEPARTMENTAL MAJOR

Prerequisite: English 1 and 2.

Major Requirements: Twenty-four semester hours in English and American literature including the following:

1. Six hours in English 55-56.
2. Six hours in one of five designated period courses (143-144, 111-122, 125-126, 131-132, 137-138).
3. Three hours in one of the major authors, Chaucer, Shakespeare, or Milton (203-204, 141, 123, 124, 117).
4. Nine hours, distributed as follows:
 - (a) Three hours of English literature before 1800. Students who have chosen 143-144 or 111-112 for the period course may substitute any three-hour course approved by their adviser.
 - (b) Three hours of English literature after 1800. Students who have chosen 125-126 or 131-132 for the period course may substitute any three-hour course approved by their adviser.
 - (c) Three hours of American literature. Students who have chosen 137-138 for the period course may substitute any three-hour course approved by their adviser.

Related work: Eighteen semester hours, which may include appropriate courses in history, aesthetics, art, music, languages, literature in translation, philosophy, or courses in composition, dramatics, and speech. Related work must be taken in at least two departments.

Electives: Students may use 12 hours of their free electives for additional work in English and American literature. The maximum credit in such courses may not exceed 36 hours. A total of 54 semester hours' credit in the department is allowed. Students who are looking forward to graduate work should take as many of the period courses as possible. No more than five seniors may be admitted to any course on the 200 level.

FORESTRY

Students without a Bachelor's degree who are preparing for work in forestry as a profession should take the courses outlined under the Academic-Forestry Combination in the section on Requirements for Degrees. However, with the consent of the instructor in charge, certain forestry courses may be elected by students in other curricula provided they have had adequate preparation (see *Bulletin of the School of Forestry*).

Members of the sophomore, junior, and senior classes, whether or not registered in the Academic-Forestry Combination, may elect the following course:

52. PRINCIPLES OF FORESTRY.—Introduction to forestry in the United States; growth of trees and forests; social and economic problems in developing America's primary renewable natural resource; contribution of forests to the national economy. 2 s.h. (w) ASSISTANT PROFESSOR STOLTENBERG

GEOLOGY

PROFESSOR BERRY, CHAIRMAN AND DIRECTOR OF UNDERGRADUATE STUDIES;
MESSRS. BOWMAN AND HERON

51. GENERAL GEOLOGY.—This course is designed to give a general view of the surface features of the earth, their origin, structure, and materials. Illustrative materials are studied in the laboratory. Excursions are made to neighboring points where the principles of the science are studied in the field. Three one-hour lectures or recitations and one three-hour laboratory. 4 s.h. (E)

MR. HERON AND STAFF

52. GENERAL GEOLOGY.—This course is designed to give some knowledge of the chief events of the earth's history. Excursions will be made to suitable neighboring localities. Three one-hour lectures or recitations and one three-hour laboratory. Prerequisite: Geology 51. 4 s.h. (E)

MR. HERON AND STAFF

55. STRUCTURAL GEOLOGY.—A study of the structural features of the earth's crust. Three one-hour lectures. Prerequisite: Geology 51, 52. 3 s.h. (E)

MR. HERON

58. GEOMORPHOLOGY.—A detailed study of the process at work on the land surface and the topographic forms produced by them under different climatic conditions. This course includes practice in the interpretation of topographic maps. Three one-hour lectures or recitations and one three-hour laboratory. 4 s.h. (E)

PROFESSOR BERRY

101-102. MINERALOGY.—This course is devoted to a study of the fundamentals of crystallography and the crystal groups, using crystal models and crystallized minerals. Followed by the systematic study of about 175 important minerals. Determinative work includes exercises on sight recognition, identification by blow-pipe, and other physical and chemical tests. Excursions will be made to neighboring mineral localities. Three two-hour periods. Prerequisite: Chemistry 1-2 (can be taken concurrently). 8 s.h. (E)

PROFESSOR BERRY

151. ECONOMIC GEOLOGY.—Study of world distribution, geologic occurrence, and uses of important mineral deposits. Three one-hour lectures or recitations and one three-hour laboratory. Prerequisite: Geology 101-102. 4 s.h. (E)

PROFESSOR BERRY

152. INTRODUCTORY PALEONTOLOGY.—Systematic study of invertebrate paleontology, dealing mainly with generic characters of the fossil invertebrates and their use in identifying and correlating geologic formations. Three one-hour lectures or recitations and one three-hour laboratory. Prerequisites: Geology 51, 52, and Zoology 2. 4 s.h. (E)

PROFESSOR BERRY

164. INTRODUCTION TO GEOLOGIC MAPPING.—An introduction to the fundamental principles and techniques used in geologic mapping, including applicable methods of surveying, the use of aerial photographs, the interpretation of geologic maps, and the solution of problems in geologic relationships. Field excursions will be made when possible. Two hours of lecture and three hours of laboratory each week. Prerequisites: Geology 51, 52, 55, 151. 3 s.h. (E)

MR. HERON

DEPARTMENTAL MAJOR

Prerequisites: Chemistry 1-2; Zoology 2, Geology 51, 52.

Major Requirements: 1. Number of hours needed, 30 s.h. 2. Required courses, Geology 55, 101-102, 151, 152, 164. 3. Recommended courses, Geology 58.

Related Work: 1. Number of hours needed for A.B., 12 s.h.; for B.S., 18 s.h. 2. Required courses, 1 year Mathematics. 3. Departments in which related work is usually taken, Chemistry, Economics 115-116, Mathematics, Physics, Sociology 111, Zoology, and General Engineering.

GERMANIC LANGUAGES AND LITERATURE

PROFESSOR VOLLMER, CHAIRMAN; ASSOCIATE PROFESSOR MAXWELL, DIRECTOR OF UNDER-GRADUATE STUDIES; ASSOCIATE PROFESSOR WILSON, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSOCIATE PROFESSOR SHEARS; DR. BAUM AND MR. YATES

All courses except Elementary and Intermediate German may be taken for one semester only, when circumstances make it advisable.

1-2. **ELEMENTARY GERMAN.**—6 s.h. (E & W)

ASSOCIATE PROFESSOR MAXWELL AND STAFF

3-4. **INTERMEDIATE GERMAN.**—6 s.h. (E & W)

ASSOCIATE PROFESSOR WILSON AND STAFF

51-52. **INTRODUCTION TO GERMAN LITERATURE.**—A third year course. Both literary and linguistic factors are combined with practice in the spoken language. 6 s.h. (W)

ASSOCIATE PROFESSOR SHEARS AND STAFF

For courses in the 100 and 200 group which will be offered in 1954-1955, please consult list furnished by Dean's office before registration. The only prerequisite for 100 group courses is German 3-4.

107, 108. **SCIENTIFIC GERMAN.**—The German language as used in the various contemporary sciences. 6 s.h. (W)

ASSOCIATE PROFESSORS MAXWELL AND WILSON

109, 110. **GERMAN PROSE FICTION.**—Origin and development of the German novel with special emphasis on the nineteenth century. 6 s.h.

ASSOCIATE PROFESSOR WILSON

115, 116. **GERMAN DRAMA OF THE NINETEENTH CENTURY.**—A study of leading dramatists from Kleist to Hauptmann. 6 s.h.

ASSOCIATE PROFESSOR WILSON

117, 118. **GERMAN CONVERSATION.**—A course in writing and speaking German for properly qualified students. 6 s.h.

PROFESSOR VOLLMER; ASSOCIATE PROFESSORS MAXWELL AND SHEARS

125, 126. **CONTEMPORARY GERMAN LITERATURE.**—A study of representative works of the twentieth century. 6 s.h.

ASSOCIATE PROFESSOR SHEARS

127, 128. **SURVEY OF MODERN GERMAN LITERATURE.**—Excerpts from novels, poems and short stories illustrating the development of modern German literature are read. 6 s.h.

PROFESSOR VOLLMER

131, 132. **INTRODUCTION TO GOETHE.**—The reading of his early novels and epics and works pertaining to his life. 6 s.h.

ASSOCIATE PROFESSOR MAXWELL

203, 204. **EIGHTEENTH CENTURY.**—Eighteenth-century German literature in its relation to contemporary European philosophy. 6 s.h. (W)

PROFESSOR VOLLMER

207, 208. **GERMAN ROMANTICISM.**—The course covers the entire field of German romanticism from 1800 to 1850. 6 s.h. (W)

PROFESSOR VOLLMER

209, 210. KLEIST, GRILLPARZER, AND HEBBEL.—The dramatic development in Germany after Schiller. 6 s.h. (w)

211, 212. HEINRICH HEINE AND HIS TIME.—Heine's life and thought, and the contemporary European culture. 6 s.h. (w) PROFESSOR VOLLMER

213, 214. LITERATURE OF THE EMPIRE, 1871-1914.—A study of the literature of this period with emphasis on a few leading writers. 6 s.h. (w)

ASSOCIATE PROFESSOR SHEARS

DEPARTMENTAL MAJOR

1. *Prerequisites*: German 1-2 and 3-4.

2. *Major Requirements*: Twenty-four semester hours in the German Department. Twelve of these must be selected from the 200 courses. The remaining twelve may be selected from German 51-52 and any courses in the 100 group except 119-120.

3. *Related Work*: Eighteen semester hours, chosen from the Humanities with the approval of the German Department.

GOVERNMENT

See courses listed under Political Science.

GREEK

ASSOCIATE PROFESSOR TRUESDALE, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR ROSE, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSOR WAY

Courses 15, 121, 122, 131, 141, 142 are entirely in English and require no knowledge of the Greek language. The purpose in offering them is to give a wider circle of students some conception of the debt which modern civilization owes to the Greeks.

1-2. COURSE FOR BEGINNERS.—Open to all students. 6 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

15. MYTHOLOGY.—A study of Greek mythology and the use made of it in art and English literature. No knowledge of the Greek language is required. Open to freshmen as an elective in either semester. 3 s.h. (w & e)

ASSOCIATE PROFESSOR TRUESDALE AND ASSISTANT PROFESSOR WAY

53-54. XENOPHON.—*Anabasis*, Books I-IV. Open to students who have completed course 1-2. 6 s.h. (w)

ASSOCIATE PROFESSOR ROSE

105-106. HOMER.—*Iliad*, Books I-III. PLATO.—*Apology* and *Crito*. Open to students who have completed courses 1-2 and 53-54 or their equivalents. 6 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

107-108. EURIPIDES.—*Medea*. SOPHOCLES.—*Oedipus Tyrannus*. ARISTOPHANES.—*Clouds*. Open to students who have completed the required preliminary work. 6 s.h. (w)

ASSISTANT PROFESSOR WAY

115-116. SIGHT READING IN GREEK.—Three hours per week through the year. 4 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

117-118. GREEK PROSE COMPOSITION.—The character of this course is determined by the needs of the students enrolled. 3 s.h. (w) ASSOCIATE PROFESSOR ROSE

121, 122. GREEK LITERATURE IN ENGLISH TRANSLATION.—The purpose of this course is to give a general survey of the life and civilization of the Greeks, especially to those who have never studied the language but wish to become acquainted with some of the choicest portions of the literature by the use of translations. It is, however, open as an elective to all juniors and seniors, whether they know Greek or not. First, the *Iliad* and the *Odyssey* are read in translation and

illustrated with stereopticon views of the excavations and discoveries at Troy and other cities of the Aegean age; then, many of the extant plays of the three great tragic poets are studied in English translation. 6 s.h. (w & e)

ASSOCIATE PROFESSORS ROSE AND TRUESDALE

Students may elect course 122, whether they have taken course 121 or not.

131. HISTORY OF GREECE.—The history of the Greek world from the Late Bronze Age to the Macedonian conquest. Open to seniors, juniors, and (by arrangement) sophomores. No knowledge of Greek is required. 3 s.h. (e)

ASSISTANT PROFESSOR WAY

141, 142. GREEK ART.—(May be treated as two semester-courses.) Open to seniors, juniors, and sophomores. A comprehensive survey of the development of Greek architecture and Greek sculpture in all periods. Course 141 is opened by a preliminary account of Egyptian, Mesopotamian, and Aegean artistic backgrounds. Course 142 is devoted chiefly to Greek art of the greatest period with the main emphasis on sculpture, and may be elected independently of course 141. All lectures are fully illustrated by slides. No knowledge of Greek is required. 6 s.h. (e)

ASSISTANT PROFESSOR WAY

201-202. GREEK TRAGEDY.—6 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

203-204. HOMER.—*Odyssey*. PINDAR AND BACCHYLIDES. 6 s.h. (w)

ASSOCIATE PROFESSOR TRUESDALE

207-208. GREEK ORATORS.—Selected speeches. 6 s.h. (w)

ASSISTANT PROFESSOR WAY

209-210. PLATO.—*Symposium*, *Protagoras*, and parts of the *Republic*. 6 s.h. (w)

ASSISTANT PROFESSOR WAY

Only one of the year-courses for seniors and graduates (201-210), listed above, is offered each year.

243. ATHENIAN TOPOGRAPHY.—The topography and monuments of ancient Athens. 3 s.h. (w)

ASSISTANT PROFESSOR WAY

244. GREEK EPIGRAPHY.—Lectures on the history of the alphabet and the development of the local Greek alphabets, followed by extensive reading of inscriptional texts in facsimile. 3 s.h. (w)

ASSISTANT PROFESSOR WAY

245. GREEK DIALECTS.—A linguistic study of transliterated inscriptions illustrative of the major Greek dialects. The interrelations of the dialectal forms are examined with reference, where possible, to their origin in protoethnic Greek. 3 s.h. (w)

ASSISTANT PROFESSOR WAY

246. GREEK HISTORICAL INSCRIPTIONS.—The more valuable historical inscriptions are read in chronological order and interpreted in their general bearing upon the course of Greek history. 3 s.h. (w)

ASSISTANT PROFESSOR WAY

247-248. GREEK ARCHAEOLOGY.—Advanced course in the general field for seniors and graduates, comprising architecture, sculpture, vases, and the minor arts. 6 s.h. (w)

ASSISTANT PROFESSOR WAY

Of the courses numbered from 243 to 248 only two semester-courses are offered each year.

DEPARTMENTAL MAJOR

Prerequisite: Greek 1-2.

Major Requirements: A candidate for a major in Greek must complete 24 semester hours, including the following courses: Greek 53-54, 105-106, 107-108, 117-118, and 131.

Related Work: Eighteen semester hours selected from at least two other departments subject to the approval of the Greek Department. Appropriate courses are chosen usually in Latin, Philosophy, Art, and English.

Graduates of Duke University may attend the American School of Classical Studies at Athens, Greece, without charge for tuition and are eligible to compete for the fellowships that are offered annually by the School. These consist of two fellowships in Greek archaeology and one in the language, literature, and history of ancient Greece, each with a stipend of \$2,000. They are awarded mainly on the basis of examinations held in the beginning of February of each year.

HEALTH AND PHYSICAL EDUCATION

TRINITY COLLEGE AND THE COLLEGE OF ENGINEERING

MR. CAMERON, DIRECTOR; PROFESSOR AYCOCK, DIRECTOR OF UNDERGRADUATE STUDIES AND SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSORS BLY, FALGONE, HARRISON, MONTFORT, AND PERSONS; MESSRS. BRADLEY, COX, DRAGO, AND SORENSEN

REQUIRED PHYSICAL EDUCATION FOR MEN

A student must complete four semesters of physical education in order to fulfill graduation requirements.

All students are given a medical and physical examination before registration. Students who have physical handicaps must register in Corrective Physical Education. Students assigned to these classes will take work suited to their particular needs and capacities.

Students without defects will register in Physical Education 1 and 2 in their freshman year. The activities are selected from the following: Apparatus, combative games (fundamentals of basketball, soccer, volleyball), swimming and tumbling. Swimming is required each semester of freshman year.

After a student has completed Physical Education 1 and 2, he may complete his physical education requirement by electing and satisfactorily completing two courses from the following individual and team sports: 51. Apparatus-Tumbling; 52. Badminton; 53. Basketball-Handball; 54. Boxing-Wrestling; 55. Lacrosse-Soccer; 56. Swimming, advanced; 57. Tennis-Volleyball.

For information concerning gymnasium uniforms see page 186.

ELECTIVES IN PHYSICAL EDUCATION

The courses listed below are arranged to meet the increasing demand for teachers who are qualified to coach and teach Physical Education. They are open for credit only to students in the High School Teaching Program. These students may elect 15 semester hours from courses in this group. Six semester hours may be elected from the courses listed under Special Methods in Physical Education and 9 semester hours may be elected from the courses listed under Theory and Practice in Physical Education. The courses should be selected with the advice of the Director of Undergraduate Studies in order to meet the needs of the individual.

SPECIAL METHODS IN PHYSICAL EDUCATION

163. ATHLETIC COACHING IN SECONDARY SCHOOLS.—Theory and practice in the fundamentals of coaching baseball and track. Prerequisites: courses 1 and 2. Open to juniors and seniors. Sophomores by permission only. 3 s.h. (w)
MESSRS. CHAMBERS AND PARKER

164. ATHLETIC COACHING IN SECONDARY SCHOOLS.—Theory and practice in the fundamentals of coaching football and basketball. Prerequisites: courses 1 and 2. Open to juniors and seniors. Sophomores by permission only. 3 s.h. (w)
MR. CAMERON AND STAFF

THEORY AND PRACTICE IN PHYSICAL EDUCATION

65. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.—A study of the objectives and principles upon which physical education is based. The history of physical education is studied in order to show the changes in objectives, principles, and methods and as an aid in the interpretation of trends. Open to sophomores, juniors, and seniors. 3 s.h. (w)
PROFESSOR AYCOCK

172. RECREATIONAL LEADERSHIP.—Combative contests, games, mass athletics, supervision of community recreation. Open to juniors and seniors. Sophomores by permission only. 3 s.h. (w)
ASSISTANT PROFESSOR HARRISON

182. THE ADMINISTRATION OF HEALTH AND PHYSICAL EDUCATION IN SECONDARY SCHOOLS.—Presents the everyday problems that arise in the experience of the teacher of health and physical education. Open to juniors and seniors. 3 s.h. (w)
ASSISTANT PROFESSOR HARRISON

190. PROTECTIVE PRACTICES IN PHYSICAL EDUCATION.—A study of safety measures including training and first aid. Open to juniors and seniors. 3 s.h. (w) MR. CHAMBERS AND ASSISTANT PROFESSOR MONTFORT

HEALTH EDUCATION

132. SCHOOL HEALTH PROBLEMS.—A course designed (a) to familiarize the teacher with school health problems such as physical screening, communicable disease prevention and control, healthful school environment; (b) to present methods and materials for health teaching in elementary and secondary schools. 3 s.h. (w) PROFESSOR AYCOCK

WOMAN'S COLLEGE

PROFESSOR GROUT, CHAIRMAN AND DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR EDDY, SUPERVISOR OF FRESHMAN INSTRUCTION IN PHYSICAL EDUCATION; ASSISTANT PROFESSOR UHRHANE, SUPERVISOR OF FRESHMAN INSTRUCTION IN HEALTH EDUCATION; ASSOCIATE PROFESSORS BOOKHOUT AND LEWIS; ASSISTANT PROFESSOR HOLTON; MRS. KEPPEL, MRS. MASSEY, MISS RIEBEL, MRS. STOCKTON AND MISS WILLIAMS

Every student must take one semester ($\frac{1}{2}$ s.h.) of each of the following types of activity: individual or dual sport, dance, and swimming (if she is unable to pass the swimming test). The remaining work necessary to complete the requirement may be elected from the activities listed in this section. All required work should be completed by the end of the junior year.

All students are given a physical and medical examination upon entering and at intervals throughout their college course. Classes in individual physical education and light sports are arranged for those who should not take the more active work.

For information concerning gymnasium costumes see page 189.

SPECIAL FRESHMAN PHYSICAL EDUCATION

At the beginning of the freshman year, after a series of tests has been given, individual conferences are held and each student is guided into the type of activity she most needs, as determined from the evaluation of the test scores and the results of the conference. This course continues for half the semester after which all freshmen take body mechanics and social hygiene for the remainder of the semester.

In the Woman's College the three-year requirement is met as follows:

FRESHMAN YEAR

FRESHMAN ACTIVITIES.—First semester. $\frac{1}{2}$ s.h. Second semester 1 s.h.

PHYSICAL EDUCATION I, BODY MECHANICS AND SOCIAL HYGIENE.—First semester. $\frac{1}{2}$ s.h.

SOPHOMORE YEAR

PHYSICAL EDUCATION ACTIVITIES.—1 s.h.

JUNIOR YEAR

PHYSICAL EDUCATION ACTIVITIES.—1 s.h.

PHYSICAL EDUCATION ACTIVITIES

Individual and dual sports: Archery, badminton, bowling, diving, fencing, golf, life saving, light sports, riding, swimming, tennis, first aid, instructors' life saving and water safety.

Team sports: Basketball, hockey, softball, volleyball.

Rhythmic Activities: Ballroom dance, folk dance, fundamental movement, fundamental rhythms, modern dance, square dance, tap dance.

Developmental Activities: Body mechanics, individual physical education, motor skills, posture.

PHYSICAL EDUCATION THEORY

Students preparing to teach physical education and health on a full-time or part-time basis may receive academic credit for all courses listed below. Course 107 is also open to students preparing for social group work and religious education.

Students in the Elementary School Teaching Program must take Physical Education 102 and Health Education 112.

All students may receive credit for Physical Education 105-106, 114, and Health Education 41 and 62.

91. FIRST AID AND SAFETY IN PHYSICAL EDUCATION.—A study of measures which must be taken in the organization and teaching of physical education to insure maximum safety. The Standard Red Cross First Aid Course will be included. 2 s.h. (E) ASSOCIATE PROFESSOR BOOKHOUT

101. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.—An historical survey of physical education stressing the relationship between the types of activity developed and the social and political ideals of different nations and periods. A study of the principles upon which physical education is based. Analysis of successful teaching in physical education. 2 s.h. (E) PROFESSOR CROUT

102. THE TEACHING OF PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS.—A study of methods and materials used in teaching physical education to children; includes discussion on the theory of physical education, and practice in teaching elementary school activities. Required of students in the elementary school teaching program. 3 s.h. (E) ASSOCIATE PROFESSOR LEWIS

103. GAMES AND RHYTHMS FOR CHILDREN.—Required of students preparing for full-time teaching of physical education. 2 s.h. (E)
[Offered every other year alternating with P.E. 107.] ASSOCIATE PROFESSOR LEWIS

105-106. METHODS AND MATERIALS IN RECREATION.—A course intended to familiarize students with recreation activities and methods of organizing groups in these activities. Laboratory work includes practical leadership experience with a recreational club or group in a city organization. General fields covered are: Social Activities, Music Activities, Folk and Square Dancing, Games and Sports, Arts and Crafts, Drama Activities. Open to juniors and seniors without prerequisite. A year course meeting five periods per week throughout the year. Students who have had 102 or 103 may take 106 without 105. 6 s.h. (E)

ASSISTANT PROFESSOR HOLTON

107. THE TEACHING OF RHYTHMIC ACTIVITIES.—Basic theory and practice in the methods of teaching various types of dance activities. 2 s.h. (E)
[Offered every other year alternating with P.E. 103.] MRS. STOCKTON

113. MAMMALIAN ANATOMY.—A study of all organ systems with special emphasis on osteology, arthrology and myology. The cat serves as laboratory animal, but constant application is made to man. Prerequisite: Zoology 1 and 2. 4 s.h. (E)

ASSOCIATE PROFESSOR BOOKHOUT

114. KINESIOLOGY.—A study of muscle function. Analysis of fundamental movements with emphasis on the development of normal posture and efficient body movement. Required of students taking the major in physical education. Prerequisites: Zoology 1 and 2, and P.E. 113 or Zoology 53. 3 s.h. (E) (Not open to students who have had P.E. 116.)

ASSOCIATE PROFESSOR BOOKHOUT

116. KINESIOLOGY.—A study of muscle function. Analysis of human motion as a basis for therapeutic exercise. Prerequisite: Human Anatomy. 3 s.h. (w)
(Not open to students who have had P.E. 114.) ASSOCIATE PROFESSOR BOOKHOUT

117. BODY MECHANICS AND INDIVIDUAL PHYSICAL EDUCATION.—A study of the fundamentals of body movement and teaching methods for courses in body mechanics. An analysis of faulty postures for which individual physical education procedures are indicated. 3 s.h. (E) ASSOCIATE PROFESSOR BOOKHOUT

119. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION.—Curriculum building in physical education. A study of facilities including plans and equipment for gymnasias and playgrounds. Administrative problems of the high-school teacher and public school supervisor. 2 s.h. (E) PROFESSOR GROUT

120. EVALUATION AND MEASUREMENT IN PHYSICAL EDUCATION.—History of evaluation and measurement in physical education. Elementary statistics and application of statistical procedure in testing. Familiarity with athletic achievement tests for elementary and secondary schools, and with testing of sport techniques, rhythm, and general qualities of motor ability, motor capacity, and motor educability. 2 s.h. (E)

181-182. METHODS AND MATERIALS IN PHYSICAL EDUCATION.—A course in the theory and practice of teaching and officiating in games and sports. Laboratory hours arranged to provide practice on the field and in the gymnasium. 6 s.h. (E) ASSOCIATE PROFESSOR LEWIS AND STAFF

185. ADVANCED METHODS AND MATERIALS IN PHYSICAL EDUCATION.—A continuation of 181-182. Required of seniors preparing for full-time teaching in physical education. 2 s.h. (E) ASSOCIATE PROFESSOR LEWIS AND STAFF

HEALTH EDUCATION

41. PERSONAL HEALTH.—A presentation of basic health information appropriate to the college age group. Emphasis is placed on the individual's responsibilities and potential contributions toward personal and family health. Either semester. 3 s.h. (E) ASSISTANT PROFESSOR UIRRHANE

62. COMMUNITY HEALTH PROBLEMS.—This course includes problems of health in community living such as environmental health hazards and their control, health problems specific to certain groups, and the place and contribution of official and non-official public health agencies. Emphasis is placed on the responsibility of each community member to recognize problems and to work together toward the goal of a mentally, physically and socially healthful community. 3 s.h. (E) ASSISTANT PROFESSOR UIRRHANE

111-112. SCHOOL HEALTH.—This course is designed to meet the needs of the classroom teacher. It deals with the organization and administration of the school health program; with modern principles of education as applied to health education; with basic health problems confronting the schools; and with methods and materials for teaching health education. Primarily designed for students preparing to teach in elementary schools and for physical education majors. 6 s.h. (E) ASSISTANT PROFESSOR UIRRHANE

NOTE: 111 does not carry credit without 112. 112 may be taken without 111.

REQUIREMENTS FOR TEACHING HEALTH AND PHYSICAL EDUCATION IN PUBLIC SCHOOLS

The following requirements have been set up for students in the Teaching Program who wish to qualify as full-time or part-time teachers of Health and Physical Education. These requirements meet the standards of the North Carolina Department of Public Instruction for certification in Health and Physical Education and of most of the other states represented in the student body. Students preparing to teach in any state are advised to consult the department about specific requirements.

Prerequisites: Physical Education 91 and 101; Health Education 111 or 41; Zoology 1-2.

Major Requirements: 23 s.h. including Physical Education 103, 107, 114, 117, 119, 181-182, 185, and Health Education 112.

Recommended Course: Physical Education 120.

Related Work: 17 to 19 s.h. Of these hours 8 must be in anatomy and physiology (P.E. 113, Mammalian Anatomy and Zoology 151, Principles of Physiology). Of the remaining hours work done in Department of Education leading to teacher certification is acceptable. Courses in Chemistry, Zoology, Sociology, Psychology, Art and Music are recommended.

HISTORY

PROFESSOR SYDNOR, CHAIRMAN; PROFESSOR HAMILTON, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR FERGUSON, SUPERVISOR OF FRESHMAN INSTRUCTION;
 PROFESSORS CARROLL, CLYDE, CURTISS, LANNING, MANCHESTER, AND WOODY;
 ASSOCIATE PROFESSORS NELSON, PARKER, ROPP, AND WATSON; ASSISTANT
 PROFESSORS ACOMB, COLTON, DECONDE, HOLLEY, AND STEVENS;
 DR. DURDEN, MESSRS. OLIVER AND DOWNS

The undergraduate courses in history are designed to afford (1) an introduction to the study of history by a consideration of the history of the modern world; (2) a more intensive study of general American history; (3) opportunities for more advanced study of phases of American, English, European, Hispanic-American, Russian, and Eastern history which interest the teachers and students.

Course 1-2 or 51-52 or E1-2 or an equivalent is a prerequisite for all other courses; course E1-2 is the prescribed course for students in the College of Engineering; courses 91 and 92 are prerequisite for all 100 and 200 courses in United States history. However, seniors with written permission from the instructor may take advanced American history courses without having had 91 and 92. Sophomores who took only one semester of course 1-2 in the freshman year may be admitted to courses 91 and 92, 63, or 67-68, provided they made a grade of B or above on the semester taken. Courses offered for seniors and graduates are limited to twenty-five students; juniors may not elect them without special permission from the Department and the Executive Committee of the Graduate Faculty. Sophomores must obtain permission of the instructor in order to be admitted to courses numbered above 100; students who are not fully qualified sophomores will not be admitted to these courses.

1, 2. HISTORICAL BACKGROUND OF THE WORLD TODAY.—This course is an introduction to the study of modern history with special reference to the issues in the modern world. Topics selected for emphasis are: the contest between liberty and authority in the modern state; changing economic organization and theory—capitalism and the challenges to it; the problems of peace and war among the states; the changing faiths men live and die by. Beginning about 1500 with the rise of the European dynastic states, the story is pursued in the first semester to approximately 1871, and in the second through the two great world wars. The central theme in both semesters is the expansion of the influence of Western Europe throughout the world, with some attention to the rise of the United States as a world power. 6 s.h. (W & E)

Sophomores and juniors are not admitted to this course. One semester of the course may be counted as a general elective but not as fulfilling the minimum uniform requirements or, except as provided above, as a basis of further work in history.

PROFESSOR HAMILTON; ASSOCIATE PROFESSORS FERGUSON, PARKER, AND ROPP;
 ASSISTANT PROFESSORS ACOMB, COLTON, AND DECONDE;
 DR. DURDEN, MR. DOWNS, AND MR. OLIVER

E1-2. THE UNITED STATES IN THE WORLD TODAY.—This course is designed for students in the College of Engineering. Topics treated in the first semester are: the rise of national states in Western Europe and other factors attending the discovery and settlement of the New World; the foundation of American institutions; the establishment of the Federal Republic; the frontier, the westward movement, and contemporary international development; the Civil War; the growth of industry and its influence on society; the Spanish-American War and the emergence of the United States as a world power. In the second semester the emphasis is on the growing interdependence of the Western nations in the twentieth century; their influence throughout the world; the participation of the United States in the World Wars and the resultant problems of today. 6 s.h. (W)

ASSISTANT PROFESSOR HOLLEY; DR. DURDEN

51, 52. HISTORICAL BACKGROUND OF THE WORLD TODAY.—An introductory course for sophomores, juniors, and seniors dealing with the topics indicated in the description of course 1-2. 6 s.h. (W & E)

PROFESSOR CURTISS; ASSOCIATE PROFESSOR ROPP; ASSISTANT
 PROFESSORS ACOMB AND COLTON; DR. DURDEN;
 MR. DOWNS AND MR. OLIVER

[Not open to freshmen or to students who have had course 1-2.]

63. NAVAL HISTORY AND ELEMENTARY STRATEGY.—After a review of earlier periods, attention is given to the rise of sea-power and its importance in more recent times and to naval actions, especially in the two World Wars. This course is not open to students who have had N.S.101. 3 s.h. (w)

ASSOCIATE PROFESSOR ROPP

67-68. THE BACKGROUND OF MODERN EUROPEAN CIVILIZATION.—The course deals primarily with the intellectual-cultural history of the peoples of Europe and adjacent areas from the period of the earliest written records to the formation of the European states-system (c. 1648). The work aims to develop critical appreciation and maturity of judgment in historical interpretation through the use of original sources. 6 s.h.

ASSOCIATE PROFESSOR NELSON

91. THE DEVELOPMENT OF AMERICAN DEMOCRACY TO 1865.—This course is a study of trends vital to an understanding of the United States today. The main theme is the development of American democracy. Problems of foreign policy, the growth of capitalism, political practices, social behavior, and conflicting ideals are considered in relation to this main theme. 3 s.h. (w & e)

ASSOCIATE PROFESSOR WATSON; ASSISTANT PROFESSORS
DeCONDE, HOLLEY, AND STEVENS

92. THE DEVELOPMENT OF AMERICAN DEMOCRACY, 1865 TO THE PRESENT.—A continuation of History 91 with emphasis upon the emergence of contemporary problems. 3 s.h. (w & e)

ASSOCIATE PROFESSOR WATSON; ASSISTANT PROFESSORS
DeCONDE, HOLLEY, AND STEVENS

Courses 91 and 92 are intended both to serve as continuation courses in the study of history and to afford the student an opportunity to gain the understanding of the past of the United States essential for intelligent citizenship. These courses are prerequisite for all 100 and 200 courses in United States history, but this prerequisite may be waived for seniors by written permission of the instructor.

105-106. POLITICAL AND CONSTITUTIONAL HISTORY OF ENGLAND.—The origins and evolution of the principal institutions of the English government, related to their setting in a changing society. 6 s.h. (w)

PROFESSOR HAMILTON

107-108. SOCIAL AND CULTURAL HISTORY OF ENGLAND.—A study of English history from the fourteenth century to the present time in an effort to arrive at a synthesis of social and political events and thus provide a background for the study of English literature. Emphasis is placed on the ages of Chaucer, Shakespeare, and Milton; the eighteenth and early nineteenth centuries; the reign of Victoria and the twentieth century. 6 s.h. (e)

ASSOCIATE PROFESSOR FERGUSON

Sophomores who made an average grade of B or above on course 1-2 may be admitted to this course.

113-114. AMERICA IN THE TWENTIETH CENTURY.—A historical survey of political, economic, and social problems of twentieth-century United States. Emphasis is placed on reform movements from the Muckrakers through the New Deal, the emergence of the United States as a world power, and conflicting ideas and ideologies. 6 s.h. (w)

ASSOCIATE PROFESSOR WATSON

115-116. THE AGE OF ABSOLUTE MONARCHY AND THE FRENCH REVOLUTION.—The study in the first semester deals primarily with the political and social institutions of Western Europe in the seventeenth and eighteenth centuries, including such topics as the absolute monarchy in theory and practice, the peasants, the nobles, commercial and industrial classes, the Church. The study in the second semester includes the old regime in France, the French Revolution, and Napoleonic institutions in Western Europe. 6 s.h. (e)

ASSISTANT PROFESSOR ACOMB

119-120. THE HISTORY OF THE LABOR MOVEMENT IN EUROPE.—The origins, growth, and organization of the industrial working classes of Europe from early modern times to the present. This course deals with the history of the organized labor movement in England, France, Germany, Italy, and the Scandinavian countries in relation to political and economic developments in those countries. Emphasis is placed on the rise of trade unions, the emergence of working class political parties, the influence of revolutionary and reformist theories, and the role of international labor organizations. 6 s.h. (w)

ASSISTANT PROFESSOR COLTON

121-122. THE FOREIGN RELATIONS OF THE UNITED STATES.—This course is designed to acquaint the student with the historical development of ideas and movements that have shaped American attitudes toward the outside world and to provide an historical introduction to the formal conduct of diplomacy. 6 s.h. (w)

ASSISTANT PROFESSOR DECONDE

127. HISTORY OF LATIN AMERICA THROUGH THE FORMATION OF THE NATIONAL GOVERNMENTS.—3 s.h. (w)

PROFESSOR LANNING

128. INTER-AMERICAN AFFAIRS.—This course treats the relations of the Latin-American states with each other and with the United States with the design of explaining the current significance of Latin America. Chief emphasis is placed upon social problems and movements common to all the republics and upon the role of the United States in Latin-American affairs, including such topics as American intervention; contributions of the United States to Latin-American life in such matters as public health; Pan-Americanism; Pan-Hispanism; foreign penetration and ideologies; the cultural and commercial aspects of the Good Neighbor Policy; Latin-American states in the World War. 3 s.h. (w)

PROFESSOR LANNING

135-136. EUROPE IN THE TWENTIETH CENTURY.—The work in the first semester deals with the period before 1920, including such topics as international relations at the beginning of the twentieth century, the rise of German naval power, the Triple Alliance and the Triple Entente, the economic interdependence of the world, the Turkish Revolution, the Turco-Italian War and the Balkan wars, the first World War, and its immediate aftermath. In the second semester such topics are treated as the rise of totalitarian states, the disruption of world trade, and the second World War. 6 s.h. (w)

PROFESSOR CARROLL

141-142. THE FAR EAST FROM COMMODORE PERRY TO CHIANG KAI-SHEK.—Historical interpretations of the role of Eastern Asia in the recent World War with attention to such topics as Western imperialism in China and Japan in the nineteenth century; the rise of Japan as a military and industrial power; the emergence of militant Chinese nationalism; the fusion of the Far Eastern and the European wars into a world conflict; the rise of Chinese communism. 6 s.h. (w)

[Not offered in 1954-55]

PROFESSOR CLYDE

153-154. THE HISTORY OF THE SOUTH.—A study, beginning in the Colonial period, of the development of the Southern part of the United States with particular attention to its distinctive characteristics and institutions and to their influence in shaping Southern attitudes toward major questions of national policy. 6 s.h. (w)

PROFESSOR WOODY

161-162. RUSSIA FROM IVAN THE TERRIBLE TO PRESENT TIMES.—Topics treated include the rise of the Russian state and its relations with Poland and Turkey; the agrarian problem and the rise of industry; the Russian Revolution; the political, agricultural, and industrial policies of the Soviet Union; the role of the U.S.S.R. in World War II; and its postwar policies. 6 s.h. (w)

PROFESSOR CURTISS

[Not offered in 1954-55]

UNDERGRADUATE SEMINAR

HISTORY 201-202. SENIOR SEMINAR IN HISTORY.—A course designed to introduce qualified students to advanced methods of historical research and writing and to the appraisal of critical historical issues. Prerequisites: History 1-2 (or 51-52), 91-92, and the consent of the instructor. Open only to seniors. This course, when taken by a history major, would be in addition to the 6 semester hours required in 200-level courses of the History Department. 6 s.h. (w)

ASSOCIATE PROFESSOR PARKER

FOR SENIORS AND GRADUATES

203-204. THE UNITED STATES, 1850-1900.—The rise of sectionalism, secession, war-time problems of the Union and Confederacy, political and economic adjustments of Reconstruction, the status of the Negro, the New South, problems of capital and labor, the agrarian revolt, political parties and reform, the Spanish-American War. 6 s.h. (w)

PROFESSOR WOODY

205-206. THE UNITED STATES IN THE TWENTIETH CENTURY.—The emergence of the United States as a major power: attention is focused on domestic developments and conflicting theories of expansion of federal power. Emphasis in the first semester is on the Progressive era and the first World War; the second semester is devoted to the twenties and to the Franklin Roosevelt administration. 6 s.h. (w)

ASSOCIATE PROFESSOR WATSON

Not open to students who have had 113-114.

209-210. CONSTITUTIONAL HISTORY OF THE UNITED STATES, 1760 TO THE PRESENT.—A study of the basic problems in forming the Constitution; of its development through the major crises in the history of the United States; of the effects of changing social, cultural, economic, and political conditions on the Constitution. 6 s.h. (w)

ASSISTANT PROFESSOR STEVENS

215-216. THE FOREIGN POLICY AND DIPLOMACY OF THE UNITED STATES.—The work in the first semester, covering the period 1775-1877, deals with such topics as the origin and development of basic foreign policies; isolation from Europe; paramount interests in Latin America, including the Monroe Doctrine; international co-operation in the Far East. The work in the second semester, covering the period since 1877, deals with topics such as the rise of the new "manifest destiny"; beginnings of American imperialism in Latin America and the Far East; the failure of traditional neutrality in the first World War; postwar conflicts between isolation and collective security; involvement in the second World War. 6 s.h. (w)

PROFESSOR CLYDE

[Not offered in 1954-55]

217-218. EUROPE SINCE 1870.—International relations since the Franco-German War is the chief subject of study in this course; special emphasis is placed upon the underlying economic and political influences. 6 s.h. (w)

PROFESSOR CARROLL

221-222. THE AGE OF THE RENAISSANCE.—The decline of characteristic features of medieval civilization and the rise of modern European institutions with particular attention to intellectual movements from Dante to Erasmus. 6 s.h. (E)

[Not offered in 1954-55]

ASSOCIATE PROFESSOR NELSON

225-226. THE AGE OF THE REFORMATION.—A survey of European civilization from 1500 through the Peace of Westphalia. 6 s.h. (E)

ASSOCIATE PROFESSOR NELSON

227-228. EUROPE IN THE NINETEENTH CENTURY.—A study, beginning with the career of Napoleon Bonaparte, of the forces and personalities influential in the nineteenth century. Emphasis in the first semester is on the problems of the biographer; in the second, on those of a student of national communities. 6 s.h.

ASSOCIATE PROFESSOR PARKER

230. THE PORTUGUESE EMPIRE AND THE RISE OF BRAZIL.—The course deals with Portuguese explorations, the establishment of the Portuguese Empire in the East, the transplanting of Portuguese culture overseas, and the rise of a native Brazilian civilization. 3 s.h. (w)

PROFESSOR MANCHESTER

231-232. THE HISPANIC COLONIES AND REPUBLICS IN AMERICA.—The development of the Iberian states as colonizing powers, the conquest of America, the Spanish treatment of the Indian, the contest between Spain and other European nations over America, the independence movement, the struggle for stable government, the rise of liberalism with special emphasis upon Mexico from the Revolution of 1910 to the present, and basic inter-American developments. 6 s.h. (w)

PROFESSOR LANNING

233-234. THE INSTITUTIONAL, CULTURAL, AND SOCIAL HISTORY OF HISPANIC AMERICA.—The first semester of this course deals with subject races, the development of mixed breeds, the governmental system, the Church and the Inquisition, and Spanish culture with emphasis upon university subjects. In the second semester the work deals with the political ideas of the wars of independence, revolution and dictatorship, the rise of public education, public health, land reform, and proletarian movements. 6 s.h. (w)

PROFESSOR LANNING

[Not offered in 1954-55]

241-242. **THE FAR EAST.**—The history of the Western impact on Eastern Asia in the nineteenth and twentieth centuries. Emphasis is placed on such matters as commercial and colonial expansion, the opening of China and Japan, the development by the Western Powers and Japan of colonial, imperialistic, and nationalistic interests, and the rise of Communist power in Asia. 6 s.h. (w) PROFESSOR CLYDE

243-244. **THE UNITED STATES AND THE FAR EAST.**—An historical analysis of American relations with the peoples of Eastern Asia during the nineteenth and twentieth centuries. 6 s.h. (w) PROFESSOR CLYDE

[Not offered in 1954-55]

245-246. **WAR IN THE MODERN WORLD.**—This course is concerned with the relations between warfare and modern political, economic, and social conditions. Special attention is given to the development of British and American military methods and to the events of the American Civil War and the two World Wars. The work in the first semester deals with Clausewitz's theories of warfare and the period from the introduction of gunpower to 1871; in the second semester there is a more detailed analysis of recent land, sea, and air warfare. 6 s.h. (w)

ASSOCIATE PROFESSOR ROPP

261-262. **RUSSIA IN THE TWENTIETH CENTURY.**—A study of the background of the Revolution of 1917 followed by an analysis of the history and policies of the Soviet state. 6 s.h. (w) PROFESSOR CURTISS

[Not offered in 1954-55]

263-264. **AMERICAN COLONIAL HISTORY AND THE REVOLUTION, 1606-1783.**—The growth of institutions and economic life in the English colonies and the American Revolution. 6 s.h. (w) PROFESSOR WOODY

267-268. **THE TRANSITION FROM MEDIEVAL TO MODERN ENGLAND.**—A study of the changes in English society and ideas from the time of Edward III to that of Elizabeth. 6 s.h. (e) ASSOCIATE PROFESSOR FERGUSON

Not open to students who have had 107-108.

269-270. **ENGLISH HISTORY FROM THE TUDOR PERIOD TOWARD THE PRESENT.**—Emphasis is on political and governmental leaders, events, and institutions in selected periods and on the underlying forces that shaped them. 6 s.h. (w)

Not open to students who have had 105-106.

PROFESSOR HAMILTON

DEPARTMENTAL MAJOR

Prerequisites: The Introductory Course in History (1-2 or 51-52).

Major Requirements: Students desiring to take a major in history are required to elect 24 semester hours in the Department, including six semester hours in the senior year from courses in the 200 group. Students desiring to take the more advanced courses in American history should elect courses 91 and 92 in the sophomore or junior year.

COURSES APPROVED FOR RELATED WORK IN HISTORY

The number of courses refer to the description in the 1953-54 catalogue.

Aesthetics

History of Art

History of Music

Economics, but *not* the courses listed under business administration except those in economic geography

Education, 84, 105, 206, 214, 225, 253, 264

English and American Literature, but *not* composition, speech, and drama

German, Greek, Latin, Russian, and the Romance Languages: the literature courses numbered 100 or above that are not primarily conversation or composition courses

Greek 131

Latin 131-132

Philosophy, except 48

Political Science

Psychology, 206 only

Religion courses approved to satisfy the requirement in religion for graduation

Sociology courses in group I, II, 243, 246; Group IV, V.

LATIN AND ROMAN STUDIES

PROFESSOR ROGERS, CHAIRMAN AND DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR ROSE, SUPERVISOR OF FRESHMAN INSTRUCTION; MR. DELHOMME

Students who wish by study in English to make acquaintance with Roman antiquity from either a literary or an historical approach are afforded that opportunity through the courses in translated Latin Literature (111, 112), and Roman History (131, 132).

1-2. COURSE FOR BEGINNERS.—Forms, vocabulary, pronunciation and syntax are emphasized the first semester. They are followed by the reading and translating of Caesar's *Gallic War* the second semester. An effort is made to promote rapid development of ability to read easy Latin with satisfaction. 6 s.h. (w)

MR. DELHOMME

3. CICERO'S ORATIONS.—Four orations including the *Manilian Law* and *Archias* are read, and attention is paid to prose style. Prerequisite: two entrance units of Latin. 3 s.h. (E)

MR. DELHOMME

4. VERGIL'S *AENEID*.—Selections from Books I-VI, to the amount of four books or more, will be read and translated, due attention being paid to prosody. 3 s.h. (E)

MR. DELHOMME

51. LATIN PROSE.—Selections from prose authors or Cicero's *De Senectute* and *De Amicitia*, or selected books of Livy's history, with special emphasis on developing competence in reading Latin. 3 s.h. (E)

THE STAFF

52. LATIN POETRY.—Selections from the greatest Latin poets, especially Horace's *Odes*. 3 s.h. (E)

THE STAFF

57. SIGHT READING IN CLASSICAL LATIN.—One period of an hour per week devoted to practice in the reading of Latin of the classical period; designed to train students to read with facility. 1 s.h. (E)

ASSOCIATE PROFESSOR ROSE

58. SIGHT READING IN MEDIAEVAL LATIN.—One period of an hour per week devoted to reading interesting mediaeval prose and poetry. Prerequisites: at least one of the following courses: Latin 3, 4, 51, 52, and 57, or an equivalent. 1 s.h. (E)

ASSOCIATE PROFESSOR ROSE

65-66. LATIN PROSE COMPOSITION.—Recommended to students who are pursuing course 3-4, 57, and 51-52, and may at the discretion of the instructor be required of such students. 4 s.h. (E)

ASSOCIATE PROFESSOR ROSE

101. TACITUS.—Interesting and historically important selections from the *Annals* or the *Histories* of Tacitus are read, with attention to the literary style and the value of the historical narrative. 3 s.h. (E)

PROFESSOR ROGERS

102. JUVENAL.—Juvenal's literary satire forms the basis of the course. 3 s.h. (E)

PROFESSOR ROGERS

103. CICERO.—Selections from one of the major philosophical works, with attention to Cicero's philosophical thought and literary style. 3 s.h. (E)

PROFESSOR ROGERS OR ASSOCIATE PROFESSOR ROSE

104. LUCRETIUS.—A study of Lucretius as a philosophical thinker and as a poetic artist. 3 s.h. (E)

PROFESSOR ROGERS OR ASSOCIATE PROFESSOR ROSE

111, 112. ROMAN LITERATURE IN ENGLISH TRANSLATION.—Selective readings in Latin Literature in English translation with emphasis on the drama, lyric poetry, and the varied contributions of Cicero to literature in the first term, and upon the epic, the satire, and the novel in the second semester. (No language credit.) 6 s.h. (E)

ASSOCIATE PROFESSOR ROSE

131, 132. HISTORY OF ROME.—A survey of the history of the Roman State from its beginnings to the death of Justinian; its expansion; development of its constitution and public administration; social, legal, political and economic problems of perennial life and interest; the background and setting of Christianity's rise and growth. (This course carries no language credit. No knowledge of Latin is required for admission.) 6 s.h. (E)

PROFESSOR ROGERS

211-212. ROMAN ORATORY.—A reading course in the history and development of Roman oratory, based for the most part on Cicero's *Brutus* and the *Dialogus* of Tacitus. 6 s.h. (E) PROFESSOR ROGERS

DEPARTMENTAL MAJOR

Prerequisite: Latin 1-2, 3-4, or equivalent.

Major Requirements: 24 semester hours which must include courses 51-52, 101-102, 103-104, and 6 semester hours in courses at the 200-level.

Recommended Courses: Latin 65-66, Composition, and 131-132, Roman History.

Related Work: Eighteen hours of related work, elected usually in Greek, Philosophy, Art, Romance Languages, and English. Majors who contemplate graduate work are reminded of the necessity of Greek, German, and French for such study.

MATHEMATICS

PROFESSOR GERGEN, CHAIRMAN; PROFESSOR DRESSEL, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR HICKSON, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS CARLITZ, ELLIOTT, ROBERTS, AND THOMAS; ASSISTANT PROFESSOR PATTERSON; DRs. FORD, GORDON, PETTY, SHOENFIELD; MRS. MERZBACHER, MESSRS. OLSON, SMYTHE, WYLIE; AND ASSISTANTS

The following program of courses in Mathematics is planned for 1954-55. Fall: 1, 5, 6, 50, 51, 52, 53, 131, 139, 158, 235, 247, 271, 285, 291. Spring: 1, 5, 6, 16, 50, 51, 52, 53, 125, 131, 140, 175, 236, 248, 272, 286, 292.

1. INTERMEDIATE ALGEBRA.—Elementary topics, factoring, fractions, linear equations in one, two, and three unknowns, functions and graphs, exponents and radicals, elements of quadratic equations. Prerequisite: one unit in algebra and one unit in geometry. 3 s.h. (W & E) STAFF

5. COLLEGE ALGEBRA.—Advanced topics in quadratic equations, systems involving quadratics, variation, binomial theorem, progressions, inequalities, theory of equations, determinants, partial fractions, probability. This course and Mathematics 6 may be taken concurrently. Prerequisite: Mathematics 1, or one and one-half units in algebra and one unit in geometry. 3 s.h. (W & E) STAFF

6. PLANE TRIGONOMETRY.—Logarithms, right and oblique triangles, radian measure, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities and equations. Prerequisite: must be preceded or accompanied by Mathematics 5. 3 s.h. (W & E) STAFF

16. MATHEMATICS OF INVESTMENT.—Simple and compound interest, annuities certain, amortization, sinking funds, depreciation, evaluation of bonds, life insurance. Prerequisite: Mathematics 5. 3 s.h. (W) STAFF

50. PLANE ANALYTIC GEOMETRY.—Rectangular and polar coordinates, loci, straight lines, conic sections. This course and Mathematics 51 may be taken concurrently. Prerequisite: Mathematics 5 and 6. 3 s.h. (W) STAFF

51. CALCULUS I.—Differentiation of elementary functions, curve tracing, maxima and minima, motion, curvature, indeterminate forms. Prerequisite: must be preceded or accompanied by Mathematics 50. 3 s.h. (W) STAFF

52. CALCULUS II.—Integration of elementary functions, areas, solids of revolution, length of arc, surfaces of revolution, centroids, moments of inertia, pressure. Prerequisite: Mathematics 51. 3 s.h. (W) STAFF

53. CALCULUS III.—Introduction to solid analytic geometry, partial differentiation, multiple integrals, series, introduction to differential equations. Prerequisite: Mathematics 52. 3 s.h. (W) STAFF

123. HIGHER ALGEBRA.—The number system, mathematical induction, inequalities, series, recurring series, continued fractions, recurring continued fractions, summation of series, probability. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h. (W) ASSISTANT PROFESSOR HICKSON

124. STATISTICS.—Averages, moments, dispersion, skewness, kurtosis, correlation, types of distributions, curve fitting, graduation of data to type curves, sampling theory. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h. (w)

ASSISTANT PROFESSOR HICKSON

125. ELEMENTARY THEORY OF EQUATIONS.—Permutations, determinants, matrices, linear systems, polynomials and their roots, constructibility, resultants, discriminants, simultaneous equations. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h. (w)

STAFF

131. ELEMENTARY DIFFERENTIAL EQUATIONS.—Solution of differential equations of elementary types; formation and integration of equations arising in applications. Prerequisite: Mathematics 52. 3 s.h. (w)

STAFF

139-140. ADVANCED CALCULUS.—Multiple integrals, series, Taylor's theorem, partial differentiation, improper integrals, line integrals, Green's theorem, complex numbers. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR ELLIOTT

158. FINITE DIFFERENCES.—Operators, interpolation formulas for equal and unequal intervals, inverse interpolation, summation, differential and difference operators, approximate integration. Offered in alternate years. Prerequisite: Mathematics 52. 3 s.h. (w)

ASSISTANT PROFESSOR HICKSON

160. ELEMENTARY SOLID ANALYTIC GEOMETRY.—Planes, straight lines, quadric surfaces. Offered in alternate years. Prerequisite: Mathematics 53. 3 s.h.

STAFF

175. PROBABILITY.—Permutations and combinations, total and compound probability, Bayes' theorem, Bernoulli's theorem, mathematical expectation, applications. Offered in alternate years. Prerequisite: Mathematics 52. 3 s.h. (w)

ASSISTANT PROFESSOR HICKSON

FOR SENIORS AND GRADUATES

227-228. THEORY OF NUMBERS.—Congruences, arithmetic functions, compound moduli, quadratic reciprocity, Gauss sums, quadratic forms, sums of squares. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR CARLITZ

229-230. ALGEBRAIC NUMBERS.—Ideals, unique factorization, divisors of the discriminant, determination of the class number. Prerequisite: Mathematics 125. 6 s.h. (w)

PROFESSOR CARLITZ

235-236. ABSTRACT ALGEBRA.—Groups, fields, rings, matrices, quadratic and bilinear forms, general Galois theory, hypercomplex systems. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR CARLITZ

247-248. ARITHMETIC OF POLYNOMIALS.—Field theory, detailed study of finite fields, special polynomials and functions, valuation theory, the zeta function. Prerequisite: Mathematics 235, or consent of the instructor. 6 s.h. (w)

PROFESSOR CARLITZ

253-254. DIFFERENTIAL GEOMETRY.—Curves and surfaces in three dimensional Euclidean Space, applicability, differential parameters, Riemannian geometry of n -space. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR THOMAS

255-256. PROJECTIVE GEOMETRY.—Postulational, synthetic treatment centering around Desargues' theorem and the principle of projectivity. Conics, coordinates, order, continuity, metric properties. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR THOMAS

271-272. INTRODUCTORY TOPOLOGY.—Topological properties of Euclidean spaces, set-theoretic and combinatorial methods. Prerequisite: Mathematics 53. 6 s.h. (w)

PROFESSOR ROBERTS

285. MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.—Vectors, line and surface integrals, tensors, complex variables, differential and integral equations. Prerequisite: Mathematics 53. 3 s.h. (w)

PROFESSOR DRESSSEL

286. MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.—Wave equation, Fourier series, heat equation, telegraphic equations, Legendre polynomials, Bessel functions, Schrödinger's equation. Prerequisite: Mathematics 53. 3 s.h. (w) PROFESSOR DRESSEL

291-292. THEORY OF FUNCTIONS.—Limits, implicit functions, power series, double series, Cauchy's theorem and its applications, residues, Riemann surfaces, conformal mapping. Prerequisite: Mathematics 53. 6 s.h. (w) PROFESSOR GERGEN

DEPARTMENTAL MAJOR

For the A.B. degree:

Prerequisite: Mathematics 5 and 6.

Major and Related Work: 42 semester hours.

Major Requirements: Mathematics 50, 51, 52, 53, and 12 semester hours in courses in mathematics numbered above 100.

Related Work: 18-24 semester hours of course work, ordinarily in the following departments: chemistry, economics and business administration, philosophy, physics. For the B.S. degree:

Prerequisite: Mathematics 5 and 6.

Major and Related Work: 48 semester hours.

Major Requirements: Mathematics 50, 51, 52, 53, and 12 semester hours in courses in mathematics numbered above 100.

Related Work: 14-24 semester hours of course work in the natural sciences.

MEDICAL SCIENCE

These courses in medical science have been approved by the Faculty Council as appropriate for the Bachelor's degree.

103. HUMAN PHYSIOLOGY.—A course in human physiology in which the functions of all organ systems are covered. Special emphasis is given to the study of neuro-muscular and cardiovascular functions. Lectures, laboratory experiments and demonstrations, and conferences. Limited to sixteen students. Primarily for physical therapy students. Prerequisites: Chemistry 1-2 and Zoology 1-2. 6 s.h. ASSOCIATE PROFESSOR MCCREA AND STAFF

109. ANATOMY RELATED TO MOTION.—A course in human anatomy in which the dissection is restricted to the muscles, bone, and joints and to the circulatory and nervous systems as they are related to movement. Lectures and laboratory. Prerequisite: Zoology 1-2. 8 s.h. PROFESSOR MARKEE AND STAFF

NAVAL SCIENCE

PROFESSOR FORD, CAPTAIN, U. S. NAVY, CHAIRMAN; ASSOCIATE PROFESSOR CLARKE, LIEUTENANT COLONEL, U. S. MARINE CORPS, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR LAWSON, LIEUTENANT COMMANDER, U. S. NAVY, SUPERVISOR OF FRESHMAN INSTRUCTION; ASSISTANT PROFESSORS DAWSON, LIEUTENANT COMMANDER, U. S. NAVY, KUBISZEWSKI AND PATTERSON, LIEUTENANTS, U. S. NAVY; AND ASSISTANT PROFESSOR READ, MAJOR, U. S. MARINE CORPS

Standardized titles and numbers for courses are established by the Bureau of Naval Personnel for use at the 52 NROTC institutions. The first digit indicates the year of the course; the second digit indicates whether semester or quarter (0 for semester, 1 for quarter); the third digit indicates the semester or quarter of school year in which offered. Specialized courses for Marine Corps officer candidates are indicated by the letter "M" after the number, and substitute for the basic course of the same number.

NS-101. NAVAL HISTORY AND ORIENTATION.—Naval courtesy and customs; history of sea power; the elements of sea power; applications of sea power in campaigns of the two World Wars; organization for national security in the United States. 3 s.h. (w) LIEUTENANT COLONEL CLARKE, LIEUTENANT COMMANDER LAWSON

NS-102. NAVAL HISTORY AND ORIENTATION.—Uniform code of military justice; deck seamanship; rules of the nautical road; naval formations and maneuvers; basic characteristics, capabilities, and limitations of naval vessel types; nomenclature; introduction to carrier air, surface, undersea, and amphibious warfare. 3 s.h. (w)
LIEUTENANT COLONEL CLARKE,
LIEUTENANT COMMANDER LAWSON

NS-201. NAVAL WEAPONS.—Evolution of naval ordnance; types and properties of explosives; principles in design and assembly of guns, ammunition, fuses; automatic weapons; basic designs in torpedoes, mines, anti-submarine devices; rockets, principles in the control of fire of naval weapons against air, surface, and underwater targets; nuclear explosives. 3 s.h. (w)
LIEUTENANT PATTERSON

NS-202. NAVAL WEAPONS.—The elements in the problem of control of naval gun fire, the principles of mechanical and electronic solution of the problems; basic principles, capabilities and limitations of radar, sonar, and guided missiles; shore bombardment. 3 s.h. (w)
LIEUTENANT PATTERSON

NS-301. NAVIGATION.—Magnetic and gyro compass; principles of chart construction; the sailings and dead reckoning; piloting; electronic and radar navigation; relative motion; rules of the nautical road; basic aerology and meteorology; maneuvering in storm areas. 3 s.h. (w)
CAPTAIN FORD; LIEUTENANT COMMANDER DAWSON

NS-301M. EVOLUTION OF THE ART OF WAR.—A survey of the evolution of weapons, strategy, tactics and material; illustration of the classic principles of war by a study of selected battles and campaigns; a summary of the development of U. S. military and foreign policy. 3 s.h. (w)
MAJOR READ

NS-302. NAVIGATION.—Nautical astronomy, including a study of the actual and apparent motion of earth, celestial coordinates, time systems, solutions of the astronomical triangle; solutions of observations for lines of position; use of the sextant; identification of stars and planets; complete day's work in practical navigation. 3 s.h. (w)
CAPTAIN FORD; LIEUTENANT COMMANDER DAWSON

NS-302M. MODERN BASIC STRATEGY AND TACTICS.—Modern tactical principles and techniques, especially on the small unit level, illustrated by contemporary historical examples; development of a general understanding of strategy. 3 s.h. (w)
MAJOR READ

NS-401. NAVAL MACHINERY AND DIESEL ENGINES.—Principles of steam engineering as related to naval installations for main propulsion; naval boilers, turbines, and related auxiliary machinery; pumps, distilling plants, and refrigeration. Basic principles of internal combustion engines, applications to propulsion installations for naval vessels, craft, and boats; fuels and lubricants. 3 s.h. (w)
LIEUTENANT KUBISZEWSKI

NS-401M. AMPHIBIOUS WARFARE.—History and development of amphibious operations and organization; analyses of amphibious operations of World War II and of the Korean action. 3 s.h. (w)
MAJOR READ

NS-402. SHIP STABILITY, NAVAL JUSTICE, AND LEADERSHIP.—The principles of ship stability and buoyancy in the practice of ship design, and in the practice of damage control. The procedures for, and the responsibility of, an officer in the administration of naval justice. The psychology and techniques of leadership. 3 s.h. (w)
LIEUTENANT KUBISZEWSKI

NS-402M. AMPHIBIOUS WARFARE, PART II.—Further study of selected amphibious operations; Uniform Code of Military Justice; leadership. 3 s.h. (w)
MAJOR READ

REQUIREMENTS FOR COMMISSION

Naval Science: 24 semester hours.

Other university courses: Completion of course requirements to qualify for a baccalaureate degree, or higher. These courses must include Math 6 (unless math through trigonometry successfully completed in secondary school); Physics 1, 2 or

51, 52, to be completed by the end of the sophomore year (mandatory for Regular students only). Physical training must be taken in accordance with University requirements and each student must include such instruction in swimming as to qualify him as a first class swimmer.

Summer training: Regular NROTC students must participate in three periods of training on board ship or at naval shore stations. Contract students are required to take one training cruise of about six weeks' duration, normally between the junior and senior years.

PHILOSOPHY

PROFESSOR NEGLEY, CHAIRMAN; ASSISTANT PROFESSOR WELSH, DIRECTOR OF UNDERGRADUATE STUDIES; ASSISTANT PROFESSOR PEACH, SUPERVISOR OF FRESHMAN INSTRUCTION;
PROFESSORS BAYLIS AND PATTERSON; VISITING ASSISTANT
PROFESSOR BUCK; DR. CLARK

48. LOGIC.—A study of the conditions of effective thinking and clear communication, and of typical sources of fallacies. Examination of the basic principles of *deductive* reasoning (making explicit the implications of statements) and of *inductive* reasoning (the formulation and testing of hypotheses on the basis of experience and experiment). Emphasis on practical illustrations and applications. 3 s.h. (E & W)
ASSISTANT PROFESSORS WELSH AND BUCK; DR. CLARK

49. ETHICS.—An introductory consideration of basic ethical concepts and principles as developed in European and American thought and culture. 3 s.h. (E & W)
PROFESSORS BAYLIS AND NEGLEY; ASSISTANT PROFESSOR WELSH

91. INTRODUCTION TO PHILOSOPHY.—A systematic and historical examination of the major problems of knowledge, morals, and metaphysics. 3 s.h. (E & W)
PROFESSOR PATTERSON; ASSISTANT PROFESSORS PEACH,
WELSH, AND BUCK; DR. CLARK

93. HISTORY OF PHILOSOPHY; ANCIENT AND MEDIEVAL.—A study of the major philosophers of the period with special reference to the continuity of their thought. 3 s.h. (E)
PROFESSOR PATTERSON; ASSISTANT PROFESSOR BUCK

94. HISTORY OF PHILOSOPHY; MODERN.—A study of the major philosophers of the period with special reference to the continuity of their thought. 3 s.h. (E & W)
ASSISTANT PROFESSOR PEACH

97. POLITICAL AND SOCIAL PHILOSOPHY.—Discussion of the fundamental principles of political and social organization, with particular attention to democratic philosophy, corporate theory, and Marxist ideology. 3 s.h. (E)
PROFESSOR NEGLEY

98. SOCIAL IDEALS AND UTOPIAS.—Reading of selected Utopias; analysis of the value-structures and political principles of these ideal societies. 3 s.h. (E)
PROFESSOR NEGLEY

103. SYMBOLIC LOGIC.—Detailed analysis of deduction and of deductive systems. 3 s.h. (w)
DR. CLARK

104. PHILOSOPHY OF SCIENCE.—The principal philosophical and methodological problems in contemporary science. 3 s.h. (w)
DR. CLARK

109. INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE.—Examination and discussion of such problems as the origin of language, sign-using behavior, definition, the nature of interpretation, and special uses of language; scientific, poetic, persuasive. 3 s.h. (w)
ASSISTANT PROFESSOR WELSH

115. REASON AND COMMON SENSE IN 17TH AND 18TH CENTURY BRITISH THOUGHT.—Studies in the theories of reason and sentiment following Hobbes, and the development of opposition between rational, common sense, and empirical theories of knowledge and conduct. Reading in Cumberland, Shaftesbury, Hutcheson, Reid, and others. 3 s.h. (E)
ASSISTANT PROFESSOR PEACH

116. THE DEVELOPMENT OF PHILOSOPHY IN AMERICA.—A historical and critical survey of the leading philosophical movements from Colonial times to the present. 3 s.h. (E) PROFESSOR NEGLEY

117. HISTORY OF ETHICS.—A survey and analysis of the ethical systems of the great philosophers. Readings in original sources. 3 s.h. (E) ASSISTANT PROFESSOR WELSH

199. PHILOSOPHY OF RELIGION.—A critical examination of the facts of religious experience and their bearing upon metaphysics. 3 s.h. (E) PROFESSOR PATTERSON

FOR SENIORS AND GRADUATES

201. PHILOSOPHY OF ART.—A study of some fundamental issues in aesthetics, with particular reference to the fields of literature, music and painting. Problems discussed include: the nature and purposes of the arts; meaning in the arts; art and morality; the role of standards in art criticism; aesthetic judgment; interpretation and evaluation. 3 s.h. (E) ASSISTANT PROFESSOR WELSH

203. CONTEMPORARY ETHICAL THEORIES.—Reading and critical examination of the principal contributions to ethics by twentieth-century American and British moralists. 3 s.h. (E) PROFESSOR BAYLIS

205. THE PHILOSOPHY OF HISTORY.—An enquiry into the logic and methodology of the knowledge of history and into the metaphysical implications of history. 3 s.h. (E) PROFESSOR NEGLEY

208. POLITICAL PHILOSOPHY.—Analysis of the structure of social organization with particular reference to the function of legislation in democratic politics. 3 s.h. (E) PROFESSOR NEGLEY

209. THE PHILOSOPHY OF RELIGION.—A critical and constructive study of the nature of religion, of its various forms and manifestations, and of its functions in human life. 3 s.h. (E) PROFESSOR PATTERSON

211. PLATO.—3 s.h. (E) PROFESSOR PATTERSON

212. HISTORY OF MODERN PHILOSOPHY.—3 s.h. (E) ASSISTANT PROFESSOR PEACH

213-214. HISTORY OF AESTHETICS.—Theories of art and beauty from Pythagoras to Croce. 3 s.h. (E)

217. ARISTOTLE.—3 s.h. (E) PROFESSOR PATTERSON

218. MEDIEVAL PHILOSOPHY.—A study of the philosophy of the Middle Ages, with special attention to selected texts from the works of leading Christian, Jewish, and Arabian philosophers. 3 s.h. (E) PROFESSOR PATTERSON

223. CONTEMPORARY PHILOSOPHY: IDEALISM.—Examination and analysis of the idealist position in recent and contemporary philosophy, with special attention to the works of Bradley and Jordan. 3 s.h. (E) PROFESSOR NEGLEY

224. CONTEMPORARY PHILOSOPHY: REALISM.—A critical analysis, comparison, and evaluation of the several varieties of recent realistic theories, presentative and representative. 3 s.h. (E) PROFESSOR BAYLIS

225. LOCKE, BERKELEY, HUME.—3 s.h. (E)

231. PHILOSOPHY OF SCIENCE.—A historical and critical survey of the basic philosophical ideas underlying the development of modern science. 3 s.h. (E)

232. SPECIAL PROBLEMS IN PHILOSOPHY OF SCIENCE.—Investigation by students of advanced problems in philosophy of science, with special attention to a field determined by student's interest. 3 s.h. (w) DR. CLARK

236. ORIENTAL PHILOSOPHY.—A study of the genesis of philosophical ideas in the Upanishads and the Bhagavadgita, and of the development of the orthodox systems and of the philosophies of the Jains and the Buddhists. 3 s.h. (E) PROFESSOR PATTERSON

241. LOGIC.—Fundamental principles of valid deductive reasoning. 3 s.h. (w)
DR. CLARK

250. PHILOSOPHICAL ANALYSIS.—A critical study of recent and contemporary essays in philosophical analysis, and an evaluation of the nature, methods, and results of this movement. 3 s.h. (E)
PROFESSOR BAYLIS

251. EPISTEMOLOGY.—3 s.h. (E)
PROFESSOR BAYLIS

252. METAPHYSICS.—3 s.h. (E)
PROFESSOR BAYLIS

253. CONTEMPORARY BRITISH PHILOSOPHY.—A consideration of philosophical doctrines and methods which are characteristic of British philosophy today; with special emphasis on contrasts with American and continental views and approaches. 3 s.h. (E)
ASSISTANT PROFESSOR BUCK

DEPARTMENTAL MAJOR

Major Requirements: Twenty-four semester hours in philosophy including the following:

Philosophy 93 and 94.

Philosophy 117, 203, or 208.

6 semester hours in Philosophy senior-graduate courses.

Programs of study for departmental majors must be approved by the Director of Undergraduate Studies of the department.

PHYSICS

PROFESSOR NIELSEN, CHAIRMAN; ASSISTANT PROFESSOR LEWIS, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSOR CARPENTER, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS GORDY, HATLEY, LONDON, NEWSON, NORDHEIM, AND SPONER; ASSOCIATE PROFESSORS FAIRBANK AND GREULING; ASSISTANT PROFESSORS BLOCK AND WILLIAMSON; AND ASSISTANTS

A student wishing to major in physics should arrange to complete the necessary mathematics as soon as possible.

1-2. INTRODUCTORY PHYSICS.—This course traces historically and experimentally the development of the important principles of physics. This course is open to freshmen, sophomores and juniors and meets the general science requirement. Three hours of recitation and one two-hour laboratory each week. 8 s.h. (w)

PROFESSOR CARPENTER AND STAFF; AND ASSISTANTS

51-52. GENERAL PHYSICS.—This course treats the basic principles of general physics in a more quantitative manner than Physics 1-2. It is designed for sophomores and juniors, and meets in a thorough way the physics requirement for entrance into the study of either medicine or engineering, and is well suited for the general science student. A limited number of freshmen who present physics for entrance and who are taking the required mathematics concurrently may be admitted by permission of the instructor. This course is not open for credit for students who have completed Physics 1-2. Four lecture-recitations and one three-hour laboratory period each week. Prerequisites: Mathematics 5-6 or equivalent (Mathematics 6 may be taken concurrently). 10 s.h. (w)

PROFESSOR CARPENTER AND STAFF; AND ASSISTANTS

125. INTERMEDIATE PHYSICS—MECHANICS.—The course covers in a thorough manner the elements of mechanics. Three recitations per week. Prerequisites: Physics 1-2 or 51-52 or equivalent, and a course in differential and integral calculus which may be taken concurrently. 3 s.h. (w)
PROFESSOR NIELSEN

126. INTERMEDIATE PHYSICS—ELECTRICITY.—The elements of electricity and magnetism. Three lectures and one three-hour laboratory per week. Prerequisites: Physics 125 or equivalent work approved by the instructor, and differential and integral calculus. Integral calculus may be taken concurrently. 4 s.h. (w)

ASSISTANT PROFESSOR LEWIS

175. INTERMEDIATE PHYSICS—OPTICS.—The elements of geometrical and physical optics. Three recitations and one three-hour laboratory per week. Prerequisites: Physics 125 and 126 or equivalent work approved by instructor, and differential and integral calculus. 4 s.h. (w)
PROFESSOR SPONER

176. INTERMEDIATE PHYSICS—THERMODYNAMICS AND KINETIC THEORY.—The elements of thermodynamics and kinetic theory and elementary statistical mechanics. Three recitations per week. Prerequisites: Physics 125 or equivalent work approved by the instructor, and differential and integral calculus. 3 s.h. (w)
ASSOCIATE PROFESSOR FAIRBANK

A course in general college physics, Physics 125 and 126 or equivalent validated by examination, and a course in differential and integral calculus are prerequisites to all courses numbered 200 and above.

201-202. MECHANICS.—The fundamental principles of statics and the dynamics of particles and rigid bodies. Three recitations each week. 6 s.h. (w)
PROFESSOR NORDHEIM

203. ELECTRICITY AND MAGNETISM.—Fundamentals of electricity and magnetism. Electrostatics and magnetostatics. Direct current circuits and networks—bridges, potentiometers, galvanometers, alternating current circuits and networks. Electromagnetic waves. 3 s.h. (w)
ASSISTANT PROFESSOR LEWIS

213-214. CONTEMPORARY PHYSICS.—A course which covers the fundamental concepts and the experimental basis of modern physics. Three lectures each week. 6 s.h. (w)
ASSISTANT PROFESSOR LEWIS

217-218. ADVANCED PHYSICS LABORATORY.—Measurements involving the fields of mechanics, electricity, magnetism, heat, sound, optics and modern physics. 2-6 s.h. (w)
THE STAFF

219 ELECTRON TUBES AND THEIR APPLICATION.—Fundamentals of electron tubes. Motion of charged particles, space charge, gaseous conduction. Electron tube circuits. Three hours of lecture and one three-hour laboratory per week. 4 s.h. (w)
PROFESSOR GORDY

220. ELECTRONIC CIRCUIT ANALYSIS.—Linear and non-linear circuit analysis, electric oscillations, operation of filters, Fourier analysis of wave phenomenon, coupling in electrical circuits. 3 s.h. (w)
ASSISTANT PROFESSOR WILLIAMSON

225-226. ELEMENTARY INVESTIGATIONS.—The aim of this course is to provide training in the laboratory and library methods of physical research. Properly qualified students may conduct elementary investigations under the supervision of a member of the staff. 3-6 s.h. (w)
THE STAFF

DEPARTMENTAL MAJOR

A. For the A.B. degree:

Prerequisites: Physics 1-2 or 51-52 or equivalent, and Mathematics 5-6.

Major Requirements: Eighteen to 24 semester hours in physics including Physics 125, 126, 175 and 176 or equivalent.

Related Work: Eighteen to 24 semester hours from the following courses: Mathematics 51, 52, 53 and 131, and Chemistry 1-2.

B. For the B.S. degree:

Prerequisites: Physics 1-2 or 51-52 or equivalent, and Mathematics 5-6 or equivalent.

Major Requirements: Twenty-four to 34 semester hours in physics including Physics 125, 126, 175 and 176 or equivalent.

Related Work: Fourteen to 24 semester hours from the following courses: Mathematics 51, 52, 53 and 131, and Chemistry 1-2.

POLITICAL SCIENCE

PROFESSOR RANKIN, CHAIRMAN; PROFESSOR CONNERY, DIRECTOR OF UNDERGRADUATE STUDIES;
 PROFESSORS COLE, HALLOWELL, VON BECKERATH AND WILSON; LECTURER ELLIS;
 ASSOCIATE PROFESSORS SIMPSON AND BRAIBANTI; ASSISTANT
 PROFESSORS CHEEK AND HANSON; DR. HALL

The general objective of the Department of Political Science is to acquaint students with the theory and practice of government and politics at the local, state, national and international levels. While primary attention is focused upon the American political and administrative system, emphasis is also placed upon a comparative study of the political institutions and movements of thought peculiar to the nations of Europe, Latin America and the Far East. The student's attention is also directed to the problems encountered in international organization, politics and law. The development of political theories from Plato to the present day is an essential part of the department's course offerings. Methods of study include the descriptive, the historical, the legal, the comparative and the philosophical.

Directing its effort to an intelligent understanding of the contemporary world and of the responsibilities which are laid upon citizens of a democracy, the Department of Political Science shares the general objectives of a liberal arts education. While the department does not aim at vocational education, the knowledge it seeks to impart should be useful to anyone contemplating a career in the government service or politics.

Students intending to major in the department should take Political Science 11-12, 61-62, or 63-64. No student may take more than one of these three courses for credit. Ordinarily one of them must be taken before proceeding to more advanced work in the department. This rule may be waived with the consent of the instructor giving the advanced course.

The advanced courses are divided into three major groups but no sequence of courses beyond the introductory course is prescribed. The student would be well advised, however, to select some courses from each group.

The Senior Seminars are designed to provide an opportunity for majors in the department to pursue independent study and research.

INTRODUCTORY COURSES

11-12. THE AMERICAN SYSTEM OF GOVERNMENT.—An introductory study of the principles and operation of the American government in the light of the present world position of the United States. (Only open to Freshmen.) 6 s.h.
 (E & W) STAFF

[Students who complete 11 in the spring semester should thereafter take course 62 instead of 12.]

61-62. AMERICAN GOVERNMENT AND POLITICS.—A study of the American constitutional and political system. Among other topics attention is given to the development of the constitution, federal-state relations, political parties and the organization and functions of the national, state and local governments. 6 s.h.
 (W & E) PROFESSOR CONNERY; ASSOCIATE PROFESSOR SIMPSON; ASSISTANT
 PROFESSORS CHEEK AND HANSON; DR. HALL

[Not open to freshmen or to students who have had courses 11-12 or 63-64.]

63-64. MODERN CONSTITUTIONAL GOVERNMENT.—Principles and institutions of modern constitutional government, the first semester being devoted to American government, the second to government outside the United States. 6 s.h.
 (W & E) DR. ELLIS

[Not open to Freshmen or to students who have had courses 11-12 or 61-62.]

POLITICAL THEORY AND COMPARATIVE GOVERNMENT

123. INTRODUCTION TO POLITICAL PHILOSOPHY.—A course devoted to the reading and discussion of selected political classics including Plato's *Republic*, Aristotle's *Ethics* and *Politics* and other works as time permits. 3 s.h. (W)

PROFESSOR HALLOWELL

136. MAJOR EUROPEAN GOVERNMENTS.—A general introductory survey of the governments of Great Britain, France, Germany, Italy, and the Soviet Union. Special attention is given to constitutional developments, the organization and ideologies of political parties, and current political problems. 3 s.h. (w)

PROFESSOR COLE AND ASSISTANT PROFESSOR HANSON

151. GOVERNMENTS AND POLITICS OF MEXICO AND THE CARIBBEAN AREA.—A study of their contemporary governments, political problems and international relations. 3 s.h. (w)

DR. ELLIS

152. THE GOVERNMENTS AND POLITICS OF SOUTH AMERICA.—The constitutional development, governmental organization, inter-American co-operation and political problems of the principal South American states. 3 s.h. (w)

DR. ELLIS

180. JURISPRUDENCE.—The development of legal systems and institutions together with a consideration of representative philosophies of law from ancient times to the present day. 3 s.h. (w)

PROFESSOR HALLOWELL

211. POLITICAL INSTITUTIONS OF THE FAR EAST.—An analysis of the ideas underlying the development of government in Japan, China, and Korea. Study of the writings of Lao-tse, Confucius and the sacred books of Buddhism and Shinto. Particular attention is given to the theory of Confucian bureaucracy, the Taikwa Reform, the development of the Tokugawa administrative state, the constitutional reforms of Sun-Yat-sen in China and of the Meiji Era in Japan. 3 s.h. (w)

ASSOCIATE PROFESSOR BRAIBANTI

223. POLITICAL THOUGHT TO THE SEVENTEENTH CENTURY.—A survey from the time of Plato to the close of the seventeenth century; Graeco-Roman, Patristic and Germanic thought; individualism and cosmopolitanism; effect of the Church-State controversy and the conciliar movement; medieval constitutionalism; legislative sovereignty. 3 s.h. (w)

PROFESSOR WILSON

224. MODERN POLITICAL THEORY.—An historical survey and philosophical analysis of political theory from the beginning of the seventeenth to the middle of the nineteenth century. Attention is given to the rise of liberalism, the Age of Enlightenment, the romantic and conservative reaction, idealism and utilitarianism. 3 s.h. (w)

PROFESSOR HALLOWELL

225. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European constitutional government and politics. 3 s.h. (w)

PROFESSOR COLE

226. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European authoritarian and dictatorial government and politics. 3 s.h. (w)

PROFESSOR COLE

229. RECENT AND CONTEMPORARY POLITICAL THEORY.—The rise of positivism and its impact upon modern political thought, the origins of socialism, Marxism and its variants, socialism in the Soviet Union, nationalism, Fascism and National Socialism, the crisis in modern democracy, Christianity and the social order. 3 s.h. (w)

PROFESSOR HALLOWELL

231. AMERICAN POLITICAL THEORY.—An analysis of the main currents in American political thought from colonial beginnings to the present day, with emphasis upon the development of liberalism in America. 3 s.h. (w)

PROFESSOR HALLOWELL

235. THE BRITISH COMMONWEALTH.—An analysis of the political relationships between the members of the Commonwealth and a comparative study of the governments of the Dominions, with particular reference to Canada. 3 s.h. (w)

PROFESSOR COLE

252. SPANISH-AMERICAN CONSTITUTIONALISM.—A comparative study of the nature, sources, and use of political authority in the constitutional law of Argentina, Chile, Colombia, and Uruguay. 3 s.h.

AMERICAN GOVERNMENT AND PUBLIC ADMINISTRATION

125. AMERICAN POLITICAL PARTIES AND PRACTICAL POLITICS.—A study of the historical development, organization, and methods of political parties in the United States. 3 s.h. (w) ASSOCIATE PROFESSOR SIMPSON

141. PUBLIC ADMINISTRATION.—An introduction to the role of administration in the governmental process considering principles of administrative organization, methods of administrative control, personnel and fiscal management. In general the study of the organizational and administrative problems encountered by any government agency charged with carrying out a public policy. 3 s.h. (w) DR. HALL

146. LEGISLATION.—A study of the composition and structures of legislative bodies and of the legislative process with attention to procedure, methods, techniques, delegation of discretion, and the use of controls. 3 s.h. (w) ASSOCIATE PROFESSOR SIMPSON

161. GOVERNMENT AND PLANNING.—A study of special areas in government planning. The semester's work is divided into three parts: city planning—land use and zoning, housing and urban redevelopment; resource planning—the governmental problems involved in planning for the conservation and use of natural resources, with special attention given to multi-purpose development of the river and its watershed, and a brief consideration of proposals and developments in the general field of economic planning. 3 s.h. (w) ASSISTANT PROFESSOR HANSON

164. GOVERNMENT CONTROL OF THE SOCIAL AND ECONOMIC ORDER.—A study of governmental and administrative problems in the regulation of trade and the enforcement of the anti-trust laws, the regulation of transportation and communications and the role of the government in collective bargaining. Consideration is also given to the philosophic aspects of the general growth of government control of industry. 3 s.h. (w) ASSISTANT PROFESSOR HANSON

174. POLITICS AND ECONOMICS.—An analysis of the influence of politically dominant forces and ideologies upon economic policies and of economics upon politics in societies of principal Western countries since the seventeenth century. 3 s.h. (w) PROFESSOR VON BECKERATH

190. PUBLIC PERSONNEL ADMINISTRATION.—Principles, problems, and functions of government personnel administration; formal and informal organization for personnel management; comparison of public employment philosophies, policies and services with general personnel management, including recruitment, promotion, training, classification, morale and discipline, compensation, and retirement of public employees. 3 s.h. (E) ASSISTANT PROFESSOR CHEEK

191. TOPICS IN LOCAL GOVERNMENT.—Problems in the general area of county and local government including the administration of government services such as education, public welfare, law enforcement; inter-governmental relationships; administrative reorganization; methods of popular control; and the reconstruction of state and local government so as to meet present-day needs. 3 s.h. (E) ASSISTANT PROFESSOR CHEEK

207. AMERICAN CONSTITUTIONAL LAW AND THEORY.—A study of leading principles of American government, as developed through judicial interpretation of the Constitution. 3 s.h. (w) PROFESSOR RANKIN

209. PROBLEMS IN STATE AND LOCAL GOVERNMENT IN THE UNITED STATES.—A study of the historical development of state and local governments, their present organizations and subdivisions, and their relation to each other. Special attention is given to the position of the states in the federal union through the study of federal-state, inter-state, and state-local relations. 3 s.h. (w) PROFESSOR RANKIN

230. AMERICAN POLITICAL INSTITUTIONS.—A study of the formation and development of institutions of the national government in the United States, with historical and analytical treatment. Among other topics this course is concerned with the Constitutional Convention of 1787, and the development of Congress, the Presidency, and the Supreme Court. 3 s.h. (w) PROFESSOR RANKIN

241. ADMINISTRATIVE MANAGEMENT.—An advanced course in public administration with special attention being given to the development of scientific management, its application to government in the United States and a consideration of current problems in organization, procedures, work simplification, and management improvement. 3 s.h. (w) PROFESSOR CONNERY

242. NATIONAL ADMINISTRATION.—A study of the administrative organization, working concepts and procedures of the United States Government, illustrated through the operations of the Bureau of the Budget. 3 s.h. (w) PROFESSOR CONNERY

246. GOVERNMENT ADMINISTRATION AND PUBLIC POLICY.—Through use of the laboratory and case study techniques, a consideration of the types of administrative problems that the United States Government encounters in the field of public policy, and their possible solution. 3 s.h. (w) PROFESSOR CONNERY

271. SOCIOPOLITICS AND CAPITALISM.—Labor and labor policies in Western Europe and the United States in the nineteenth and twentieth centuries; the development of monopoly power and political power of labor in recent decades. 3 s.h. (w) PROFESSOR VON BECKERATH

291. PROBLEMS OF MUNICIPAL GOVERNMENT.—An analysis of problems relating to the structural system and activities of municipalities in the United States. 3 s.h. (w) PROFESSOR RANKIN

292. MUNICIPAL ADMINISTRATION.—A study of principles and methods relating to municipal administration in the United States. 3 s.h. (w) PROFESSOR RANKIN

INTERNATIONAL LAW AND RELATIONS

121. ELEMENTS OF INTERNATIONAL RELATIONS.—Analysis of international politics, of the foundations of national power, and of international co-operation, with emphasis upon attempted solutions of the central problems of international security. 3 s.h. (w) DR. ELLIS

122. MODERN INTERNATIONAL POLITICS.—A survey of politics leading to the two World Wars with emphasis upon present day conditions resulting from these major conflicts. 3 s.h. (w) DR. ELLIS

Students who have received credit for History 135-136 may not receive credit for this course.

131. SURVEY OF FAR EASTERN POLITICS.—An introductory survey of international politics in Eastern Asia and the Western Pacific; the rise of Japan as a modern state; China's struggle for political unity, independence and national development. 3 s.h. (Formerly Political Science 111) (w) DR. ELLIS AND ASSOCIATE PROFESSOR BRAIBANTI

132. CONTEMPORARY PROBLEMS IN FAR EASTERN POLITICS.—The impact of World War II and its aftermath on political institutions and economic structures in the Pacific area. 3 s.h. (Formerly Political Science 112) (w) DR. ELLIS AND ASSOCIATE PROFESSOR BRAIBANTI

158. CONTROL OF AMERICAN FOREIGN POLICY.—A consideration of the forces which are responsible for the formulation of American foreign policy, and a study of the important factors which have influenced contemporary United States policy in the major areas of the world. The course includes an analysis of the respective roles of the President, Congress, Department of State, and the United Nations, as well as military and public opinion. 3 s.h. (w)

212. INTERNATIONAL POLITICS OF THE FAR EAST.—An analysis of the relations of China, Japan and Korea *inter se* and with outside powers, with emphasis upon changing power relationships within the Asian cultural sphere. 3 s.h. (w) ASSOCIATE PROFESSOR BRAIBANTI

221. INTERNATIONAL PUBLIC ORGANIZATION.—A study of the structure and functioning of the United Nations organs, of related specialized agencies such as the International Labor Organization, and of regional agencies such as the Organization of American States. 3 s.h. (w) PROFESSOR WILSON

227-228. INTERNATIONAL LAW.—Elements of international law, particularly as interpreted and applied by the United States; rights and duties of states with respect to recognition, state territory and jurisdiction, nationality, diplomatic and consular relations, treaties, treatment of aliens, pacific settlement of disputes, international regulation of the use of force, and collective security. 6 s.h. (w)

PROFESSOR WILSON

UNDERGRADUATE SEMINARS

201. SENIOR SEMINAR IN POLITICAL SCIENCE.—A seminar intended primarily for majors in Political Science, devoted to the reading, discussion and analysis of major works in modern and contemporary political science. Students are expected to prepare papers on relevant topics for group discussions. Open only to seniors. Prerequisite: consent of the instructor. 3 s.h. (w) PROFESSORS COLE AND HALLOWELL

202. SENIOR SEMINAR IN POLITICAL SCIENCE.—Intended primarily for majors in Political Science, this seminar provides an opportunity for the application of principles to current political problems. It provides a means whereby specially qualified students can make a concentrated study of some problem of their own choice. Papers are required and special attention is given to research methods and materials. Political Science 201 is recommended but not required. Open only to seniors. Prerequisite: consent of the instructor. 3 s.h. (w) PROFESSOR CONNERY

DEPARTMENTAL MAJOR

Prerequisite: Political Science 11-12 or 61-62 or 63-64.

Major Requirements: Eighteen semester hours of work in the Department above courses 11-12 or 61-62 or 63-64, including at least nine semester hours in Senior-Graduate courses.

Related Work: Six hours each in two departments approved by the Political Science adviser. Courses may not be those primarily open to freshmen. Usually related work is taken in the Departments of History, Economics, Sociology, or Philosophy.

PSYCHOLOGY

PROFESSOR RODNICK, CHAIRMAN; ASSISTANT PROFESSOR GARMEZY, DIRECTOR OF UNDERGRADUATE STUDIES; PROFESSORS ADAMS, DAI, KOCH, KUDER, LUNDHOLM, AND ZENER;

ASSOCIATE PROFESSORS BANHAM, COHEN, KIMBLE, AND LODGE; ASSISTANT

PROFESSORS BORSTELMANN, COLLIER, GUTTMAN, JONES, MCHUGH, AND

REICHENBERG-HACKETT; VISITING ASSISTANT PROFESSOR KALISH;

LECTURERS BLEKE AND GOLDSTONE

Three or six semester hours in psychology may be used to meet the Social Science and History requirement for the A.B. Degree. The courses which will meet the requirement are: Psychology 91 or Psychology 91 plus either Psychology 100 or 101.

Psychology 91 or its equivalent is a prerequisite for all other courses in psychology. Six semester hours in psychology (including Psychology 91) or special permission of the course instructor or the director of undergraduate studies are required for admission to Psychology 144, 145, 148, 206, 212, 215, and 236.

91. INTRODUCTORY PSYCHOLOGY.—An introduction to the facts, principles, and problems of normal adult psychology through a study of psychological methods as applied to motivation, emotions, perception, sensation, thinking, memory, learning, individual differences, and personality. Offered both semesters. 3 s.h. (E & w) STAFF

100. PERSONALITY AND SOCIAL BEHAVIOR.—A survey of basic psychological principles underlying the study of personality in relation to the social environment. Among the topics discussed are the development and modification of behavior, the process of socialization of the individual, factors influencing adjustment to the social environment, the interaction of culture and personality. 3 s.h. (E) ASSISTANT PROFESSORS GARMEZY AND REICHENBERG-HACKETT

101. INTRODUCTORY SOCIAL PSYCHOLOGY.—A survey of problems, concepts and methods in the study of social relations and group behavior. Topics to be discussed include: socio-cultural factors in the development of motives, values, and attitudes; psychological factors underlying the development of group opinions; the study of small-group behavior with emphasis on social influences and communication; social change and social movements. 3 s.h. (E & W)

ASSISTANT PROFESSORS JONES AND MCHUGH

104. COMPARATIVE PSYCHOLOGY.—An examination of the bearing upon general psychological theory, especially in the fields of motivation, learning, and development of observations and experimental investigations of animal behavior. 3 s.h. (E) Not offered 1954-55.

106. ABNORMAL PSYCHOLOGY.—A systematic presentation of the psychology of functional mental disorders with emphasis on its bearing upon general psychological theory. 3 s.h. (E)

PROFESSOR LUNDHOLM

110. APPLIED PSYCHOLOGY.—Applications of psychology to problems of personnel selection, industrial efficiency, advertising and selling, and other problems of practical interest. 3 s.h. (E)

ASSISTANT PROFESSOR MCHUGH

111. ADVANCED GENERAL PSYCHOLOGY.—A more intensive study of several selected problem areas in the field of general psychology with special emphasis on experimental methods and findings in the areas considered. 3 s.h. (E) Not offered 1954-55.

116. PSYCHOLOGY OF ADJUSTMENT.—The course is planned to give an adequate understanding of problems of adjustment and of mental hygiene. Lectures and discussions cover an application of the principles and findings of normal and abnormal psychology as these relate to the adjustment of the average individual in our changing society; a survey of the principles of mental hygiene; discussions of current socio-cultural trends significant for individual adjustment. 3 s.h. (E)

ASSISTANT PROFESSOR REICHENBERG-HACKETT

Not open to students who have had Education 68.

119. ELEMENTARY LABORATORY PSYCHOLOGY.—A sequence of experiments with human and animal subjects on selected problems in learning, motivation, emotion and sensory processes. Emphasis will be placed upon the techniques involved in the design and execution of experiments and in the analysis and interpretation of scientific data. Laboratory and lecture. 4 s.h. (E).

ASSISTANT PROFESSOR GUTTMAN

120. BASIC STATISTICAL TECHNIQUES IN PSYCHOLOGY.—The application of elementary statistical techniques to the collection, analysis, and interpretation of data in psychological research. 3 s.h. (E)

ASSISTANT PROFESSOR COLLIER

121. CHILD PSYCHOLOGY.—A detailed study of the practical problems of infancy and early childhood, with special emphasis upon learning, emotional development, social adjustment, and modern conceptions and methods of child training and guidance. 3 s.h. (E)

ASSISTANT PROFESSOR MCHUGH

Not open to students who have had Education 118.

122. ADJUSTMENT OF THE PRE-SCHOOL CHILD.—Study and application of techniques of observing, recording and interpreting the behavior of the pre-school child. The course is designed to meet the needs of students interested in the personality development and social adjustment of children, to train them in techniques of observing and interpreting the physical, emotional, and intellectual development of the individual child; the role of each child within the social structure of a play group, and a study of the development of group integration. One hour lecture and 4 hours laboratory. Permission of the instructor. 3 s.h. (E)

ASSISTANT PROFESSOR REICHENBERG-HACKETT

126. ADOLESCENT PSYCHOLOGY.—The mental, social, and emotional development of adolescence and youth will be studied, with special attention given to such topics as interests, motivations, home problems, sex differences, recreation, delinquency, and development for citizenship. Prerequisite: Psychology 121 or Education 118. 3 s.h. (E)

ASSISTANT PROFESSOR MCHUGH

130. PRINCIPLES AND METHODS OF PSYCHOLOGICAL EVALUATION.—This is an introductory course in test methods used by psychologists in measuring and evaluating mental processes. The nature, purposes and utilization of various types of tests and psychological techniques will be discussed and demonstrated. Among the tests to be studied will be standard scales of intelligence, verbal and performance, individual and group methods; tests of special abilities, aptitudes, attitudes and interests; personality tests, rating scales and projective methods. 3 s.h. (E)
ASSOCIATE PROFESSOR BANHAM

132. THE PSYCHOLOGY OF INDIVIDUAL DIFFERENCES.—A study of the nature and causes of individual and group variations in intelligence, special abilities, social and emotional characteristics. These will be considered in relation to developmental sequence, aging factors, sex, race and socio-economic conditions. 3 s.h. (E)
ASSOCIATE PROFESSOR BANHAM

141. PERSONALITY AND BEHAVIOR DISORDER.—Behavior disorder and neurotic symptom formation are studied from the viewpoint of the psychological principles underlying the adjustment of the deviant personality. 3 s.h. (E)
PROFESSOR RODNICK

144. LEARNING AND MOTIVATION.—A survey of the basic facts and principles of human and animal learning and motivation. Topics covered include conditioning, trial and error learning, insightful learning, primary and secondary motivation, the relationship between motivation and learning and cultural variations in motives. Students in the course will perform a series of representative experiments. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) ASSOCIATE PROFESSOR KIMBLE

145. EXPERIMENTAL APPROACHES TO PERSONALITY.—A survey of psychological studies related to anxiety, conflict and frustration behavior and their implications for personality organization and development. Students will perform a series of representative experiments. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)
ASSISTANT PROFESSOR GARMEZY

146. EXPERIMENTAL PSYCHOLOGY IN INDUSTRY AND ENGINEERING.—Applications of psychological principles to the solution of problems in industry and engineering. Topics covered include visual and auditory communication, visibility and legibility, visual display, control design, machine design, motivational and learning factors influencing production. Representative studies will be reviewed. Students in the course will perform several pertinent experiments. 3 s.h. (E)
ASSISTANT PROFESSOR COLLIER

148. PSYCHOLOGY OF PERCEPTION AND THINKING.—A study of the basic phenomena of perception and thinking as determined by the stimulus situation, motivation, learning and personality variables. Students will perform a series of representative experiments. Prerequisites: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)
PROFESSOR ZENER

203. PURPOSIVE PSYCHOLOGY: CONATION AND OUR CONSCIOUS LIFE.—A systematic presentation of the psychology of adult human achievements, adaptive as well as creative, with emphasis upon the significance for these endeavors of the acts of experiencing. 3 s.h. (E)
PROFESSOR LUNDHOLM

206. SOCIAL PSYCHOLOGY.—A study of the constitution of society by man and of man by society. An analysis of social-psychological phenomena, such as: kinds of membership character, social movements, status and role-taking behavior, social determinants of perception and personality development and perceptual determinants of societies. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E)
PROFESSOR ADAMS

212. PHYSIOLOGICAL PSYCHOLOGY.—A survey of the interrelationships of biological and psychological factors in behavior, with particular reference to reflex action, motivation, learning and emotion. Emphasis will be placed on the relation between psychological theories and biological data. Presupposes Introductory Zoology. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) ASSISTANT PROFESSOR GUTTMAN

215. DEVELOPMENTAL PSYCHOLOGY.—Theory of personality structure and the changes it undergoes in development from infancy to old age, learning, conflict, character, intelligence, developmental crises, etc.; evaluation of researches on personality dynamics; lectures, readings, motion picture demonstrations. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) PROFESSOR ADAMS

223. ABNORMAL PSYCHOLOGY.—A systematic presentation of the psychology of functional mental disorders with emphasis on its bearing upon general psychological theory. This course constitutes a slightly more technical survey of the same topic matter as Psychology 106. Seniors who have taken Psychology 106 are not eligible for Psychology 223. 3 s.h. (E) PROFESSOR LUNDHOLM

231-232. INTRODUCTION TO RESEARCH.—Restricted to senior psychology majors with at least a "B" average in psychology who have completed Psychology 119, Psychology 120 and one course from among 144, 145, and 148. Before registration an outline of the project must be submitted for written approval by a departmental committee and by the staff member to whom it assigns the supervision of the research. (E) STAFF

236. THEORETICAL PSYCHOLOGY.—This course will be devoted to the analysis of techniques of theory construction in psychology. The discussion of these methodological issues will be coordinated with the analysis of concrete formulations in contemporary psychological theory. Prerequisite: 6 s.h. in psychology or special permission of the instructor or the director of undergraduate studies. 3 s.h. (E) Not offered in 1954-55. PROFESSOR KOCH

DEPARTMENTAL MAJOR

Prerequisite: Psychology 91 or equivalent.

Major Requirements: 24 semester hours in psychology including: Psychology 91, 119, 120; at least one course selected from Psychology 144, 145, and 148; at least one 200 level course.

Related Work: 18 semester hours of related work which usually includes courses in zoology and sociology or anthropology. Additional selected courses in chemistry, economics, education, mathematics, philosophy and physics which may meet the minor requirement must have the approval of the director of undergraduate studies.

RELIGION

PROFESSOR MYERS, CHAIRMAN; ASSISTANT PROFESSOR PERRY, DIRECTOR OF UNDERGRADUATE STUDIES AND SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSOR CRUM; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PRICE, SALES AND WETHINGTON; MR. DANIELS

The uniform course requirements in Religion may be fulfilled by completing six semester hours in any of the following courses: 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

Specific prerequisites are indicated in the descriptions of some courses. Where prerequisites are stated in terms of Bible hours, any one of the following will satisfy a 3 semester hour prerequisite and any two, a 6 semester hour prerequisite: 1, 2, 51, 52, 101, 103, 104, 114.

1. THE ENGLISH BIBLE.—A survey of the contents of the Old Testament books in the light of their origin in the history and religion of the Hebrew people. 3 s.h. (E & W) PROFESSOR CRUM; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY, PRICE, SALES, AND WETHINGTON; MR. DANIELS

2. THE ENGLISH BIBLE.—A study of the personalities and literature of the New Testament against their Jewish, Hellenistic and Roman background. Although Religion 1 is not a prerequisite, it will be an aid to the student to complete 1 before taking 2. 3 s.h. (E & W)

PROFESSORS CRUM AND MYERS; ASSOCIATE PROFESSOR
PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY,
PRICE, SALES AND WETHINGTON; MR. DANIELS

51. THE ENGLISH BIBLE.—An introductory course in the Old Testament for sophomores and juniors. (See description of Religion 1.) Students may not receive credit for both 51 and 1. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT
PROFESSORS BRADLEY, PRICE, SALES AND
WETHINGTON; MR. DANIELS

52. THE ENGLISH BIBLE.—A survey course in New Testament life and literature for sophomores and juniors. (See description of Religion 2.) It will be to the advantage of the students to take Religion 1 or 51 before taking 52. Students may not receive credit for both 52 and 2. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT
PROFESSORS BRADLEY, PRICE, SALES, AND
WETHINGTON; MR. DANIELS

91. AN INTRODUCTION TO CHRISTIAN ETHICS.—A study of the theistic interpretation of man's moral experience, based upon the world-view of the Bible, as contrasted with other classical and contemporary moral philosophies. 3 s.h. (W)

ASSISTANT PROFESSOR PRICE

93. SURVEY OF THE WORLD'S GREAT RELIGIONS.—An introductory course designed to acquaint the student with the problems and methods of the historical study of religion. After a brief study of religion in primitive culture the world's living religions are dealt with in terms of the historical development and the beliefs, practices and contemporary significance of each. Prerequisite: 3 semester hours of Bible. 3 s.h. (E)

ASSISTANT PROFESSOR BRADLEY

94. THE BEGINNINGS OF THE CHRISTIAN CHURCH.—A study of the development of Christianity in the first two hundred years. Special emphasis will be given to the work of Paul, the later New Testament writings, the *Apostolic Fathers* and the early Apologists. Prerequisite: Religion 2 or 52. 3 s.h. (W)

ASSISTANT PROFESSOR SALES

101. THE SOCIAL TEACHINGS OF THE PROPHETS AND JESUS.—A study of the social teachings of the Old Testament prophets and of the social ideas of Jesus as they appear in the four gospels. Not open for credit to students who take Religion 103 or 114. Either semester. 3 s.h. (W)

ASSOCIATE PROFESSOR PHILLIPS

103. THE PROPHETS OF THE OLD TESTAMENT.—In this course a study is made of the history and nature of prophecy, with particular attention being given to the messages of the outstanding pre-exilic literary prophets. Students may not receive credit for both 103 and 107 or 103 and 101. 3 s.h. (E & W)

PROFESSORS MYERS; ASSISTANT PROFESSOR PERRY

104. JUDAISM FROM THE EXILE TO THE FALL OF JERUSALEM IN 135 A.D.—A study of post-exilic Judaism: the prophetic and apocalyptic developments of normative Judaism. 3 s.h. (W)

ASSISTANT PROFESSOR SALES

107. THE GREAT PROPHETS OF ISRAEL.—Special consideration will be given to the times and messages of Amos, Hosea, Isaiah, Jeremiah and Ezekiel. An effort will be made to appraise their contributions to literature, ethics, and faith. Some attention will be given to the relevance of prophetic religion for the present. Prerequisites: Religion 1, 2 or 51, 52 or equivalent. Students may not receive credit for both 103 and 107. 3 s.h.

PROFESSORS MYERS

114. THE LIFE AND TEACHINGS OF JESUS.—This course considers the period in which Jesus lived, the record of his life, and the meaning of teachings as recorded in the Synoptic Gospels. Students may not receive credit for 114 and 101; or 114 and 116. 3 s.h. (E & W)

PROFESSOR MYERS; ASSISTANT PROFESSORS
BRADLEY AND PRICE

116. THE MISSION AND MESSAGE OF JESUS.—An intensive study analyzing and interpreting the Gospel records of Jesus' career, with emphasis upon their significance for the Christian religion. Students will be expected to select and make reports on particular projects. Prerequisites: Religion 1, 2 or 51, 52 or equivalent. Students may not receive credit for both 114 and 116. 3 s.h. (w)

PROFESSOR MYERS; ASSISTANT PROFESSOR PRICE

130. CHRISTIAN ETHICS IN HISTORY AND MODERN LIFE.—A study of the meaning of the Christian way, as formulated in the New Testament, historically interpreted by the Church and applied to modern society. Prerequisite: 3 s.h. in Bible. Students may not receive credit for both 130 and 132. 3 s.h. (w)

ASSISTANT PROFESSOR WETHINGTON

132. THE CHRISTIAN AND CONTEMPORARY SOCIAL PROBLEMS.—A study of the relevance which Christianity has to such topics as science, marriage, the state, war, politico-economic ideas and practices, communism, and the race problem. The aim of the course will be to encourage personal evaluation and interpretation, using pertinent biblical teachings and the views of prominent contemporary writers as a basis for judgment. Prerequisite: 3 semester hours of Bible. Students may not receive credit for both 132 and 130. 3 s.h. (w)

ASSOCIATE PROFESSOR PHILLIPS

134. CONTEMPORARY RELIGIONS IN THE UNITED STATES.—A study of Judaism, Catholicism and Protestantism with reference to each faith's distinctive beliefs and practices; and a comparison of common and dissimilar features. 3 s.h. (w)

ASSOCIATE PROFESSOR PHILLIPS

169. CHARACTER PROBLEMS.—The psychology of adolescence and the problems of youth in character building, with attention to the character education agencies in local communities. 3 s.h. (E & w)

PROFESSOR CRUM

170. RELIGION AND THE FAMILY.—A study of marriage and American home life with emphasis upon ethical and religious aspects. Not open to students who take Sociology 250. 3 s.h. (E & w)

PROFESSOR CRUM

171. INTRODUCTION TO THE PSYCHOLOGY OF RELIGION.—A study of the genesis and growth of religious experience, with special emphasis upon the experiences of youth. 3 s.h.

181. THE NATURE AND EARLY DEVELOPMENT OF RELIGION.—Introduction to the early history of religion, the beliefs and practices of the more primitive peoples, and the religious life of the ancient world. 3 s.h. (w)

ASSISTANT PROFESSOR WETHINGTON

182. RELIGION IN THE CULTURE OF THE EAST AND WEST.—A comparative study of the meaning and role of religion in Eastern and Western cultures with particular emphasis upon the contemporary influence of the sacred literature of Hinduism, Buddhism, Confucianism, Judaism, Islam and Christianity. Prerequisite: 3 semester hours of Bible. 3 s.h. (w)

ASSISTANT PROFESSOR PERRY

185. THE NEGRO IN THE RELIGIOUS LIFE OF AMERICA.—An examination of the ways in which the Christian Church has attempted to apply the Christian ethic to race relations with attention to the ethical aspects of these relations in American life and culture. 3 s.h.

PROFESSOR CRUM

192. CHRISTIAN BELIEFS.—An introductory study of the nature, significance and contemporary relevance of some of the important Christian beliefs. Prerequisite: 3 semester hours of Bible. 3 s.h. (E)

ASSISTANT PROFESSOR BRADLEY

197. THE BIBLICAL INTERPRETATION OF HISTORY.—Based upon materials in both the Old and New Testaments, consideration is given to the view of time and eternity, to the way in which God discloses His purpose for human life and participates in human affairs, and to the divine plan for the fulfillment of history. Prerequisite: 6 semester hours of Bible. 3 s.h. (w)

ASSISTANT PROFESSOR PERRY

The following courses offered in the Divinity School may be taken by undergraduates:

103 (DS)-104 (DS). **HELLENISTIC GREEK.**—Designed for beginners to enable them to read the Greek of the New Testament. 6 s.h. MR. EDWARDS

201 (DS)-202 (DS). **FIRST HEBREW.**—The principles and structure of the Hebrew language with translation of selected Old Testament narratives. 6 s.h.

PROFESSOR STINESPRING

207 (DS)-208 (DS). **SECOND HEBREW.**—Samuel or Kings the first semester and Isaiah the second. 6 s.h. ASSISTANT PROFESSOR BROWNLEE

DEPARTMENTAL MAJOR

Prerequisite: Religion 1-2 or 51-52.

Major Requirements: A major in the Department of Religion consists of 18 semester hours of work, exclusive of the introductory course, selected with the approval of the instructor under whose supervision the student does his major work. Six of the 18 semester hours must be in courses with biblical content.

Related Work: This is usually twenty-four semester hours, in courses that relate to the educational needs of the student. In general, it includes six semester hours in philosophy, psychology, and sociology. Other courses may be chosen from the offerings in art, education, English literature, health education, Greek, history, Latin and political science.

ROMANCE LANGUAGES

PROFESSOR JORDAN, CHAIRMAN; ASSOCIATE PROFESSOR DOW, DIRECTOR OF UNDERGRADUATE STUDIES IN FRENCH; PROFESSOR DAVIS, DIRECTOR OF UNDERGRADUATE STUDIES IN SPANISH; ASSISTANT PROFESSOR CORDLE, SUPERVISOR OF FRESHMAN STUDIES IN FRENCH; ASSISTANT PROFESSOR FEIN, SUPERVISOR OF FRESHMAN STUDIES IN SPANISH; PROFESSORS KENISTON (VISITING LECTURER), PREDMORE, AND WALTON; ASSOCIATE PROFESSORS ARCHIE AND CASTELLANO; ASSISTANT PROFESSORS DEMOREST AND TORRE; DRS. GRANT AND MULDROW; MISS CAMPBELL, MRS. CASTELLANO, MRS. DOW, MR. PRATT; MRS. BRYAN, MRS. DISMUKES, MESSRS. RUBIO AND THOMISON

French 51-52 and Spanish 65-66 are the prerequisites for all elective courses. Some preparation in courses of the 100 level is prerequisite to election of courses above 200, except by special authorization of the department.

Students who, by reason of foreign residence, have had special opportunities in French or Spanish must be classified by the Director of Undergraduate Studies.

FRENCH

1-2. **ELEMENTARY FRENCH.**—Essentials of grammar, reading of appropriate material, drill in the spoken language. 6 s.h. (W & E) DR. GRANT AND STAFF

3-4. **INTERMEDIATE FRENCH.**—Readings in standard literary texts, review of verbs and syntax, oral exercises based on the reading texts. Prerequisite: French 1 and 2 or two years of high-school French. 6 s.h. (W & E)

ASSOCIATE PROFESSOR DOW AND STAFF

51-52. **INTRODUCTION TO FRENCH LITERATURE.**—Reading of representative modern and contemporary literary texts. Study of the language with stress on the achievement of oral comprehension and ability to read. Prerequisite: French 3-4 or equivalent. 6 s.h. (W & E) PROFESSOR WALTON AND STAFF

55. **INTERMEDIATE CONVERSATION.**—To be taken concurrently with French 51, except by departmental permission. Enrollment limited to 10 students per section. Recommended for prospective French majors. MRS. DOW

56. **INTERMEDIATE CONVERSATION.**—Prerequisite: French 55. To be taken concurrently with French 52. 1 s.h. (E) MRS. DOW

108. THE FRENCH ROMANTIC MOVEMENT.—The impact of the modern world on the French thinkers and great poets of the early nineteenth century. Readings from Rousseau; the eyewitness testimony of Chateaubriand; the lyric poetry of Lamartine, Vigny, Musset, and Hugo. 3 s.h. DR. GRANT

111. FRENCH DRAMA OF THE NINETEENTH CENTURY.—A survey of the French theater from the romantic period to the *Théâtre libre*. 3 s.h. (E)

ASSOCIATE PROFESSOR DOW

112. FRENCH DRAMA OF THE TWENTIETH CENTURY.—Reading of representative plays selected from the works of Bernstein, Maeterlinck, Romains, Sarment, Vildrac, J.-J. Bernard, Claudel, Lenormand, Pagnol, Giraudoux, and Anouilh. 3 s.h. (E)

ASSOCIATE PROFESSOR DOW

125. LIBERAL THINKERS OF THE EIGHTEENTH CENTURY.—Selected works of such authors as Diderot, Montesquieu, Rousseau, and Voltaire will be studied from the point of view of their impact upon the social and political thinking for the day. 3 s.h. (w)

ASSOCIATE PROFESSOR ARCHIE

127-128. ADVANCED COMPOSITION AND CONVERSATION.—During the first semester elements of syntax are briefly reviewed, along with constant drill in the conversational idiom. In the second semester, there are exercises in free composition, with intensified treatment of pronunciation and diction. 6 s.h. (E)

MRS. DOW

134. CONTEMPORARY FRENCH LIFE AND THOUGHT.—An introduction to the essential currents in French thought since 1885. Representative literary works are used as a basis for analysis and discussion of the contemporary scene. 3 s.h. (w)

ASSISTANT PROFESSOR CORDLE

210. THE AGE OF RICHELIEU.—An introduction to French life and thought in the literature of the early seventeenth century. The transition from the Renaissance to classical culture. Discussions of the baroque, the *Libertins*, the scientific rationalists, the Counter Reformation. Extensive reading in Corneille and Pascal. Lectures in French. 3 s.h. (E)

ASSISTANT PROFESSOR DEMOREST

213. FRENCH CLASSICISM.—Its initial phase. Readings from Malherbe, Molière, Racine, Boileau, La Fontaine, La Rochefoucauld, Madame de Sévigné, La Bruyère, and others. 3 s.h. (E)

PROFESSOR WALTON

214. FRENCH CLASSICISM.—Its final phase. Readings from Fontenelle, Saint-Simon, Abbé Prévost, Marivaux, Lesage, Montesquieu, Voltaire, and others. 3 s.h.

PROFESSOR WALTON

215, 216. THE MODERN FRENCH NOVEL.—A survey of the novel form from the seventeenth to the twentieth century, with particular attention to the analysis of fundamental literary tendencies; classicism, rationalism, romanticism, and realism. 6 s.h. (E)

PROFESSOR JORDAN

225. POLITICAL AND RELIGIOUS LITERATURE IN THE ROMANTIC PERIOD.—The Romantic outlook as it shapes political and religious literature from the Consulate to the Revolution of 1848. The mystics of conservatism, the prophets of a Romantic faith, and the heralds of a social republic. Lectures in French. 3 s.h.

ASSISTANT PROFESSOR DEMOREST

227. FRENCH POETRY SINCE THÉOPHILE GAUTIER.—Readings from the principal figures of the Parnassian and Symbolist movements, including Baudelaire, Leconte de Lisle, Heredia, Verlaine, Rimbaud, Mallarmé, Régnier. 3 s.h. (E)

PROFESSOR WALTON

238. ANATOLE FRANCE.—Analysis of the principal phases of his work and its relation to the French tradition. Reading of his poetry, *Le Crime de Sylvestre Bonnard*, *Thaïs*, *Le Jardin d'Épicure*, *Les Dieux ont soif*, *Le Lys Rouge*, *L'Île des Pingouins*, part of *La Vie Littéraire*. 3 s.h. (E)

PROFESSOR WALTON

SPANISH

1-2. ELEMENTARY SPANISH.—Essentials of grammar, reading of appropriate materials, drill in the spoken language. 6 s.h. (w & E)

ASSISTANT PROFESSOR FEIN AND STAFF

3-4. INTERMEDIATE SPANISH.—Readings in standard literary texts, review of verbs and syntax, oral exercises based on the reading texts. Prerequisite: Spanish 1 and 2 or two years of high-school Spanish. 6 s.h. (W & E)

PROFESSOR PREDMORE AND STAFF

65-66. INTRODUCTION TO SPANISH LITERATURE.—Reading of representative modern and contemporary literary texts. Study of the language with stress on the achievement of oral comprehension and ability to read. Prerequisite: Spanish 3-4 or equivalent. 6 s.h. (W & E)

ASSOCIATE PROFESSOR CASTELLANO AND STAFF

68. INTRODUCTION TO SPANISH-AMERICAN LITERATURE.—Reading of selected modern novels typical of Spanish-American life, culture, and thought. This course is offered sometimes as an alternate to Spanish 66 and is accepted in fulfillment of major and graduation requirements. 3 s.h. (W & E)

ASSOCIATE PROFESSOR CASTELLANO AND STAFF

71. INTERMEDIATE CONVERSATION.—To be taken concurrently with Spanish 65, except by departmental permission. Enrollment limited to 10 students per section. Recommended for prospective Spanish majors. 1 s.h. (E)

MRS. CASTELLANO

72. INTERMEDIATE CONVERSATION.—Prerequisite: Spanish 71. To be taken concurrently with Spanish 66 or 68. 1 s.h. (E)

MRS. CASTELLANO

155. REPRESENTATIVE WRITERS OF SPANISH AMERICAN LITERATURE.—Reading and discussion of major works which illustrate literary trends from the early Colonial period to 1880. 3 s.h. (E)

ASSISTANT PROFESSOR FEIN

156. REPRESENTATIVE WRITERS OF SPANISH AMERICAN LITERATURE.—Study of works which are examples of the principal literary currents after 1880, with particular reference to their relationship to social ideas and problems in the same period. 3 s.h. (E)

ASSISTANT PROFESSOR FEIN

161. SPANISH LITERATURE: OLDER PERIOD.—Reading and interpretation of representative Spanish writers from the beginnings through the Golden Age. 3 s.h. (E)

PROFESSOR DAVIS

162. SPANISH LITERATURE: MODERN PERIOD.—Reading and interpretation of representative writers from Romanticism to the present. 3 s.h. (E)

ASSISTANT PROFESSOR TORRE

173. ADVANCED CONVERSATION.—One hour a week will be devoted to a review of the elements of syntax. The remainder of the course aims to develop facility of expression through constant drill on vocabulary and conversational idiom. Prerequisite: Spanish 66 (or 68) and 71-72, or permission. 3 s.h. (E)

ASSOCIATE PROFESSOR CASTELLANO

174. PHONETICS AND DICTION.—This course is intended to round out the students' oral experience, with emphasis on accurate pronunciation. Use is made of phonographic demonstrations and corrective exercises, with individual recordings. Prerequisite: Spanish 173, or permission. 3 s.h. (E)

ASSOCIATE PROFESSOR CASTELLANO

230-231. THE STORY OF THE SPANISH LANGUAGE.—How the sounds, forms, words, and sentence structure have changed from the speech of the Roman conquerors to the language which is spoken today in Spain and Spanish America. 6 s.h.

PROFESSOR KENISTON

257. OLD SPANISH LANGUAGE.—The historical development of the language together with illustrative readings. 3 s.h. (E)

PROFESSOR DAVIS

258. OLD SPANISH LITERATURE.—The literature of the Middle Ages and the early Renaissance. 3 s.h. (E)

PROFESSOR DAVIS

260. ADVANCED COMPOSITION AND SYNTAX.—Study of fundamental difficulties in the language; practice in writing idiomatic Spanish; exercises in free composition. For students who have a satisfactory command of Spanish grammar and fair conversational ability. Prerequisites: Spanish 173-174, or permission. 3 s.h. (E)

ASSOCIATE PROFESSOR CASTELLANO

261. NINETEENTH CENTURY NOVEL.—A study of literary and social trends in the last half of the nineteenth century. Readings will be selected from the novels of Valera, Pereda, Galdós, Pardo-Bazán, Blasco Ibáñez, and their contemporaries. 3 s.h. (E) PROFESSOR DAVIS

264. MODERN AND CONTEMPORARY SPANISH THEATRE.—A brief review of the modern and contemporary Spanish theatre from the period of Romanticism. Lectures, reading, and discussion of the most representative works of Benavente, Martínez Sierra, los hermanos Quintero, etc. 3 s.h. (E) ASSOCIATE PROFESSOR CASTELLANO

265. GOLDEN AGE LITERATURE: CERVANTES.—The life and thought of Cervantes with special emphasis on his *Quijote*. 3 s.h. (E) PROFESSOR PREDMORE

266. GOLDEN AGE LITERATURE: THE DRAMA.—Study of the chief Spanish dramatists of the seventeenth century with readings of representative plays of this period. 3 s.h. (E) ASSOCIATE PROFESSOR CASTELLANO

270. THE SPANISH LANGUAGE IN AMERICA.—Development of the Spanish language from the time of the Discovery to the present. 3 s.h. PROFESSOR PREDMORE

275. CONTEMPORARY SPANISH LITERATURE. ESSAY AND LYRIC POETRY.—A study of the revision of national values and literary expression in the twentieth century with particular reference to the crisis of 1898 and to the enrichment of the Spanish tradition through extrapeninsular influences. 3 s.h. (E) PROFESSOR PREDMORE

276. CONTEMPORARY SPANISH LITERATURE: NOVEL.—A study of tradition and innovation in the twentieth century Spanish novel and emphasis on the novels of Unamuno, Baroja, Valle Inclán, and Pérez de Ayala. 3 s.h. (E) PROFESSOR PREDMORE

285. THE EARLY RENAISSANCE IN SPAIN (1474-1550).—The major aspects are: humanism, reformation and counter-reform, the beginnings of the theater, the Italianate pots, the impact of the New World, architecture and the arts. 3 s.h. (E) PROFESSOR KENISTON

286. THE LATER RENAISSANCE IN SPAIN (1550-1600).—The novel—chivalric, pastoral, picaresque—, the emergence of the *comedia*, the ballads, the mystics, lyric poets, literary theory, architecture and the arts. 3 s.h. (E) PROFESSOR KENISTON

THE TEACHING OF ROMANCE LANGUAGES

RL 118. THE TEACHING OF ROMANCE LANGUAGES.—Evaluation of objectives and methods; a study of the practical problems involved in the teaching of reading, writing, hearing, and speaking; analysis of text books, special foreign language programs, teaching aids, and testing techniques. 3 s.h. (E)

ASSOCIATE PROFESSOR DOW

DEPARTMENTAL MAJOR

Prerequisites:

For French: French 51-52 (combined with 55-56), or equivalent.

For Spanish: Spanish 65-66 (combined with 71-72), or equivalent.

Major Requirements:

For French: Eighteen semester hours of work must be completed in courses numbered above 100 and must include: (a) six semester hours in course 127-128, (b) six semester hours of literature in courses 210 to 238.

For Spanish: Eighteen semester hours of work must be completed in courses numbered above 100 and must include: (a) six semester hours of linguistic training (courses 173-174, 260); (b) six semester hours of literature in the courses numbered above 200.

RELATED WORK

Majors in Romance Languages will normally take the prescribed amount of related work in the following fields: (1) other foreign languages and literature; (2) aesthetics; (3) history and appreciation courses in music and art; (4) philosophy; (5) general psychology; (6) history; (7) general sociology and anthropology.

Majors in Spanish may take a maximum of six hours of Spanish American political science or economics if taken with or after Spanish 155-156.

RUSSIAN

ASSISTANT PROFESSOR WINNER

51-52. INTRODUCTION TO THE RUSSIAN LANGUAGE.—Open to freshmen with the approval of the Dean. 6 s.h. (w) ASSISTANT PROFESSOR WINNER

53-54. INTERMEDIATE RUSSIAN LANGUAGE.—Prerequisite: Russian 51-52 or equivalent. 6 s.h. (E) ASSISTANT PROFESSOR WINNER

63-64. INTRODUCTION TO SCIENTIFIC AND MEDICAL RUSSIAN.—Introduction to the Russian language as used in the various contemporary sciences. Prerequisite: Russian 51-52 or equivalent. 6 s.h. (w) ASSISTANT PROFESSOR WINNER
[Not offered in 1954-55]

101-102. RUSSIAN CULTURE AND LITERATURE THROUGH THE NINETEENTH CENTURY.—After a brief survey from earliest times through eighteenth-century classicism, enlightenment, and sentimentalism, attention is focused on the literature of the nineteenth century, and the development of romanticism and of the realist school. Special attention is given to the works of Pushkin, Lermontov, Gogol, Goncharov, Turgenev, Tolstoi, Dostoevski, and Gorki. Readings are assigned in English translation. 6 s.h. (w) ASSISTANT PROFESSOR WINNER

103. AN INTRODUCTION TO SOVIET LITERATURE AND CULTURE.—An analysis of the development of Russian literature and culture since the Bolshevik revolution and the effect of Soviet policy on the literary production of the time. A survey of the important literary currents from Gorki and Mayakovski through Sholokhov. Lectures and class discussion. Readings will be assigned in English translation. 3 s.h. (E) ASSISTANT PROFESSOR WINNER
[Not offered in 1954-55]

105. HISTORY OF THE RUSSIAN THEATRE AND DRAMA.—A discussion of the most significant stages of Russian dramatic art from the earliest primitive harvest ceremonies to the development of theatrical realism and naturalism in the end of the nineteenth century and the development of the dramatic arts in the Soviet Union is combined with a study of the development of the Russian theatre, with special emphasis on such figures as Stanislavski, Meierholdt, Vakhtangov, etc. Class discussion and visual demonstrations. Reading are assigned in English translation. 3 s.h. (E) ASSISTANT PROFESSOR WINNER

112. PUSHKIN AND THE BIRTH OF RUSSIAN REALISM.—A study of Pushkin and his contemporaries from the point of view of their relationship to the development of the Russian romantic movement and to the emergence of an independent Russian realistic approach to literature. An analysis of the influence of Western literary figures, particularly Byron, on the development of Russian letters of the early nineteenth century. Readings are assigned in English translation. Prerequisite: Russian 101 or consent of the instructor. 3 s.h. (E) ASSISTANT PROFESSOR WINNER

SOCIOLOGY AND ANTHROPOLOGY

PROFESSOR JENSEN, CHAIRMAN; ASSOCIATE PROFESSOR SCHETTLER, DIRECTOR OF UNDERGRADUATE STUDIES, AND SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS HART AND THOMPSON; ASSOCIATE PROFESSOR LABARRE; ASSISTANT PROFESSORS WHITRIDGE AND ROY; DR. BANKS AND MR. MCNURLIN

91-92. GENERAL SOCIOLOGY.—An introduction to the scientific study of social life; its origin, evolution and organization as illustrated in the study of a number of concrete social problems. 6 s.h. (E & w)

PROFESSOR JENSEN; ASSOCIATE PROFESSOR SCHETTLER; ASSISTANT PROFESSORS ROY AND WHITRIDGE; MR. MCNURLIN

101. GENERAL SOCIOLOGY.—A more intensive version of course 91-92, which enables the student to complete the introductory course in sociology in one semester. 5 s.h. (w) ASSISTANT PROFESSOR ROY

I. ANTHROPOLOGY

93. GENERAL ANTHROPOLOGY.—Origins and distribution of the races of mankind; a survey of human palaeontology and human biology, world archaeology, prehistory and languages; and the origins of the family, primitive economics, arts, social and political organization. Special attention is given to primitive peoples. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

94. CULTURAL ANTHROPOLOGY.—A study of the dynamics of culture, the causal factors, functions, integration and disintegration, diffusion, growth and change of cultures. Emphasis is upon the simpler societies. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

212. PRIMITIVE RELIGION.—The ethnography, the social functions and the socio-psychological meanings of religion in primitive societies. Prerequisite: course 91-92, or 101, or 93 or 94. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

213. PERSONALITY AND SOCIETY.—The sociology and social psychology of human personality, its origins in the primary group, its nature and varieties, and its integrations into secondary group institutions, with emphasis upon the normal personality and its adjustments in our society and to our culture. Prerequisite: course 91-92, or 101, or 93 or 94. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE
[Admission only by consultation with the instructor.]

214. PERSONALITY AND CULTURE.—The influence of culture patterns and social institutions on character structure, socialization of the individual and the dynamics of human personality. Comparative anthropological materials will be drawn upon. Prerequisite: course 213. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE
[Admission only by consultation with the instructor.]

215. THE AMERICAN INDIAN.—A comprehensive survey of the Indians of North and South America, including a study of origins and prehistory, archaeology, physical anthropology, languages, material culture, social and political organization, economics and religion, discussed in terms of the "culture area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE

217. THE PEOPLES OF AFRICA, ASIA, AND OCEANIA.—A comprehensive survey of non-European peoples of the Old World, covering available prehistory, archaeology, racial affiliations, languages, material culture, social and political organization, economics and religion, discussed in terms of the "cultural area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h. (w) ASSOCIATE PROFESSOR LABARRE
[Not offered in 1954-55]

II. COMMUNITY, RACE AND CULTURE

(Courses 91-92, or 101, or 93, or 94 prerequisite for all courses.)

133. SOCIOLOGY OF THE SOUTH.—The developing regional organization of the world economy studied with especial reference to Southern life and problems. A survey of the composition and distribution of population, races and race relations; economic conditions underlying population, race factors and culture of the South. Primary emphasis is upon social change and its control. 3 s.h. (w) PROFESSOR THOMPSON

134. HUMAN ECOLOGY.—A study of the human community in its competitive and cooperative aspects. 3 s.h. (w) PROFESSOR THOMPSON
[Not offered in 1954-55]

136. HUMAN MIGRATION.—A study of mankind in motion, including a consideration of the nature of migration, types of migration and settlement, and problems of migratory contacts. 3 s.h. (w) PROFESSOR THOMPSON
[Not offered in 1954-55]

137. THE NEGRO IN AMERICA.—A study of the history and changing status of the Negro regarded as a symbol and protagonist of minority groups in America and elsewhere. 3 s.h. (w) PROFESSOR THOMPSON

233. RURAL SOCIOLOGY.—The sociology of the land; peasant and folk societies and cultures; patterns of rural settlement like the farm, the plantation, the ranch and others; rural personality types; the changing character of rural life; rural problems. 3 s.h. (w) PROFESSOR THOMPSON

235. URBAN SOCIOLOGY.—A study of the city and civilization, the newspaper, the social survey, the slum and housing, neighborhoods and natural areas, urban institutions, urban problems, and city planning. 3 s.h. (w) PROFESSOR THOMPSON

237. COMMUNITY AND SOCIETY.—This course seeks to provide a frame of reference for the analysis and ordering of facts pertaining to the diverse cultures of the world, the State, the world community, the Great Society, news, mass behavior, social problems, races and classes. 3 s.h. (w) PROFESSOR THOMPSON

238. RACE AND CULTURE.—A study of the nature of race and of the relationships and problems of race. 3 s.h. (w) PROFESSOR THOMPSON

III. COLLECTIVE BEHAVIOR

(Courses 91-92, or 101, or 93 or 94 prerequisite for all courses.)

142. THE SOCIOLOGY OF DISCUSSION.—A course designed to develop practical social skills in intellectual cooperation. In the light of sociological theory of intellectual conflict, competition and cooperation, practice will be provided in the group solution of problems through committees, conferences and forums, and in the discussion processes whereby cooperation can be substituted for social antagonism. Prerequisites: either Sociology 91, 101, or 111, or 112, and six hours to be compiled from history, political science, Economics 105 and 155, and Education 115 and 176. Enrollment limited to a maximum of 30. 3 s.h. (w) PROFESSOR HART

149. INTRODUCTION TO CHILD WELFARE.—A study of heredity and environment as factors in personality development: infant conservation; welfare responsibilities of the school, emphasizing the physical and mental well-being of the child, play, and compulsory and industrial education; child labor, diagnosis and treatment of delinquency; care of the dependent and neglected child; child-caring agencies, public and private; and a community program of child welfare. 3 s.h. (E) PROFESSOR JENSEN

243. SOCIAL ATTITUDES AND COLLECTIVE BEHAVIOR.—Study of attitudes as products of social interaction; organization of attitudes into personal behavior patterns; expression of social attitudes in social, political and industrial groups; social unrest and the behavior of crowds and mobs; analysis of social movements, strikes, revolutions, and other group organizations. 3 s.h. (w) ASSOCIATE PROFESSOR SCHETTLER

246. PUBLIC OPINION AND PROPAGANDA.—Nature and development of public opinion; relation to attitude, biases, stereotypes and controversial issues; role of leaders, pressure groups and minority groups; use of radio, press, motion picture and graphic arts; propaganda and censorship; measurements of public opinion. 3 s.h. (w) ASSOCIATE PROFESSOR SCHETTLER

250. MARRIAGE AND THE FAMILY.—An analysis of contemporary marriage and family experience with emphasis on its functions, problems, resources and values. Not open to students who have received credit for Religion 170. 3 s.h. (w) PROFESSOR HART

IV. SOCIAL ORGANIZATION AND DISORGANIZATION

(Courses 91-92, or 101, or 93, or 94 prerequisite for all courses.)

153. The FIELDS OF SOCIAL WORK.—A non-professional course, designed to acquaint the student with the types of problems existing in both rural and urban communities which can be dealt with in a remedial and preventive way; how they arise in the reciprocal interaction of personality and culture, what their efforts are in terms of personal and social disorganization, how communities are organized to deal with them, and social agencies which have been developed to deal with problems of each type, together with an evaluation of effectiveness of the techniques employed. 3 s.h. (E) ASSISTANT PROFESSOR WHITRIDGE

[Not offered in 1954-55]

157. SOCIAL CHANGE AND SOCIAL CONTROL.—Basic nature of inventions as related to ideological and material factors; role of the inventor, reformer, and non-conformist; mobility, diversification and individualism as by-products of social change; techniques of social control in the family, school, church, industry and government; social planning and leadership in a dynamic society. 3 s.h. (w)

ASSOCIATE PROFESSOR SCHETTLE

158. SOCIOLOGY OF THE PROFESSIONS AND OCCUPATIONS.—Analysis of the professional and occupational structure of the American economy; shifts and trends in occupations and professions for men, women and minority groups; social and economic characteristics of occupational and professional groups; factors in the selection of a profession or occupation; sources of information about occupations and professions; measurements of aptitudes, abilities and skills; employer-employee relationships. 3 s.h. (w)

ASSOCIATE PROFESSOR SCHETTLE

165. INTRODUCTION TO INDUSTRIAL SOCIOLOGY.—An analysis and appraisal of the various factors that affect human relations in industry. It will deal with the interpersonal and intergroup relationships within the individual industrial unit which determine its efficiency as an economic and social institution; the social relationships of workers with one another and with management; their influence upon productivity, the relations of the worker toward the job, labor turnover, absenteeism, etc., and the social conditions in the community, housing, family life; recreation, etc., as they affect the social relations within the industrial community. 3 s.h. (w)

ASSISTANT PROFESSOR ROY

166. INDUSTRY AND SOCIETY.—A study of industrial institutions in their interrelationships with other forms of social behavior in the broad cultural setting of western civilization. The emphasis in this course will be on an examination of the influence of changes in the technical and social organization of industry upon community organization, social stratification, social mobility, social interaction, and personality development. Attention will center upon analysis of specific social problems resulting from the impact of industrial change. 3 s.h. (w)

ASSISTANT PROFESSOR ROY

262. EDUCATION AND THE CULTURAL PROCESS.—A study of education (1) as carried on traditionally among preliterate and folk peoples, and (2) as it becomes a problem in racially and culturally complex societies like that of the United States. 3 s.h. (w)

PROFESSOR THOMPSON

[Not offered in 1954-55]

271. SOCIAL PATHOLOGY.—A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society; poverty, physical defectiveness, malnutrition, mental deficiency, mental disease, undirected leisure activities and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. 3 s.h. (E)

PROFESSOR JENSEN

273. SPECIAL PROBLEMS IN SOCIAL PATHOLOGY.—Research projects in social and personal disorganization, limited to advanced students with the approval of the instructor. 1 to 3 s.h. *each semester*. (w)

PROFESSOR JENSEN

276. CRIMINOLOGY.—A study of the original tendencies of man and the problem of socializing these tendencies; the relations of physical and mental defectiveness and untoward influence in the home and neighborhood to crime; the development of criminological theory and procedure, emphasizing penal and reform methods, and especially modern methods of social treatment and prevention of crime. 3 s.h. (E)

PROFESSOR JENSEN

277. JUVENILE DELINQUENCY.—An intensive study of current research findings as to the nature, causes, extent and distribution of juvenile delinquency; individual and institutional methods of treatment and prevention; diagnostic clinics, juvenile courts and probation, training schools, coordinating councils and preventive agencies. 3 s.h.

[Not offered in 1954-55]

V. SOCIAL THEORY

(Course 91-92, or 101, or 93 or 94 prerequisite for all courses.)

286. **SOCIAL ETHICS.**—A study of sociological fundamentals underlying ethics, including the controversy between materialistic and idealistic social thinkers, the nature of personalities and of social organization, the nature of social values, types of social interaction and their effects upon general social values, underlying principles and facts of social change, and the bearings of all these upon certain social problems. 3 s.h. (w) PROFESSOR HART

288. **CONTEMPORARY PROBLEMS IN CULTURAL LAG.**—An exploration of such sociological problems as social evolution, cultural lag, conflict, accommodation, leadership, and social reform, in relation to the crisis of civilization, precipitated by the development of the atomic bomb and by kindred discoveries and inventions. 3 s.h. (w) PROFESSOR HART

VI. METHODS OF SOCIAL RESEARCH

(Course 91-92, or 101, or 93 or 94 prerequisite for all courses.)

191. **PRINCIPLES OF SOCIAL CASE INVESTIGATION.**—A non-professional course designed to acquaint the student with the basic research techniques employed in the case study of the interrelationships of personality and culture in various fields of sociological and anthropological interest. 3 s.h. (E) ASSISTANT PROFESSOR WHITRIDGE

193. **BASIC STATISTICAL METHODS IN SOCIOLOGY.**—The processes of definition, classification, measurement, tabulation, association, correlation, comparison of averages and of percentages, prediction, preparation and interpretation of tables and charts, as applied to and illustrated by sociological data. One lecture, one recitation and three laboratory hours. 3 s.h. (w) PROFESSOR HART

292. **STATISTICAL TECHNIQUES IN SOCIOLOGY.**—Intended for graduate students, and for undergraduates who are ready to undertake original statistical research projects. 3 s.h. (w) PROFESSOR HART

293. **SPECIAL PROBLEMS IN SOCIAL STATISTICS.**—Applications of statistical techniques to specific research topics. Limited to advanced students with permission of the instructor. 1 to 3 s.h. *each semester*. (w) PROFESSOR HART

DEPARTMENTAL MAJOR

Prerequisite: Sociology 91-92 or 101.

Major Requirements: Eighteen semester hours of work in the Department in addition to Sociology 91-92 or 101, including at least six semester hours in Senior-Graduate courses.

Related Work: A minimum of eighteen semester hours, at least twelve of which are normally chosen from two of the following fields: economics, education, history, political science and psychology. Additional courses in health and physical education, philosophy and religion may also be elected as related work when indicated by the educational requirements of the student and approved by the departmental adviser. But not more than six hours work in courses primarily open to Freshmen can be counted toward this requirement.

ZOOLOGY

PROFESSOR GRAY, CHAIRMAN; ASSOCIATE PROFESSOR ROBERTS, DIRECTOR OF UNDERGRADUATE STUDIES; ASSOCIATE PROFESSOR HUNTER, SUPERVISOR OF FRESHMAN INSTRUCTION; PROFESSORS SCHMIDT-NIELSEN AND WILBUR; ASSOCIATE PROFESSOR BOOK-HOUT; ASSISTANT PROFESSORS BAILEY, HORN AND NACE; DRS. SANDEEN, STRASBURG, VERNBERG AND WARD; MR. ROBERTSON

1. **ANIMAL BIOLOGY.**—The principles of biology as applied to animals. 4 s.h. (w & E) ASSOCIATE PROFESSORS HUNTER AND ROBERTS AND STAFF

2. GENERAL ZOOLOGY.—A brief survey of the animal kingdom. Prerequisite: Zoology 1. 4 s.h. (w & e)
ASSOCIATE PROFESSORS BOOKHOUT AND
HUNTER AND STAFF

53. COMPARATIVE VERTEBRATE ANATOMY.—A study of the anatomy and evolution of the organ systems of vertebrates. Prerequisites: Zoology 1, 2. 4 s.h. (w)
ASSISTANT PROFESSOR HORN AND STAFF

71. HEREDITY AND EUGENICS.—Effects of environment and heredity upon the individual and populations; interpretation of human genetic histories. Prerequisite: one year of zoology. 3 s.h. (w)
DR. WARD

92. GENERAL EMBRYOLOGY.—A study of the fundamental principles of embryology as illustrated in the frog, chick and mammal. Prerequisite: Zoology 53. 4 s.h. (w)
ASSISTANT PROFESSOR NACE AND STAFF

109. EVOLUTION.—The facts and theories of organic evolution. Prerequisite: two years of zoology. 3 s.h. (w)
ASSISTANT PROFESSOR BAILEY

110. INTRODUCTION TO GENETICS.—The principles and practical applications of genetics as applied to animals. (Primarily for majors in zoology.) Prerequisite: two years of zoology or consent of instructor. 4 s.h. (w)
DR. WARD

120. ORNITHOLOGY.—Lectures, laboratory and field trips dealing with the classification, adaptations, and natural history of birds. Prerequisite: one year of zoology. Zoology 53 recommended. 4 s.h. (w)
ASSISTANT PROFESSOR BAILEY

151. PRINCIPLES OF PHYSIOLOGY.—An introductory survey of physiological functions. Prerequisites: At least a year of zoology and a year of chemistry. 4 s.h. (w)
PROFESSORS SCHMIDT-NIELSEN AND WILBUR

156. VERTEBRATE HISTOLOGY.—The microscopic structure of normal tissues and organs of the vertebrate body. Training will be given in the preparation of material for microscopic study. Prerequisite: Zoology 53. 4 s.h. (w)
ASSOCIATE PROFESSOR ROBERTS

161. ANIMAL PARASITES.—An introductory course dealing with biological principles involved in parasitism of animals including man. Prerequisite: one year of zoology. 4 s.h. (E)
ASSOCIATE PROFESSOR HUNTER

193. FUNDAMENTALS OF ZOOLOGY.—The principles involved in the study of structure, function, ecology, genetics, classification, and evolution of animals. An elementary course without laboratory designed for senior students. Not open to students who have had previous courses in zoology. 3 s.h. (w)
DR. VERNBERG

196. SEMINAR: CURRENT DEVELOPMENTS IN ZOOLOGY.—Prerequisites: Zoology 53 and 92. Open only to seniors. 2 s.h. (w)
STAFF

FOR SENIORS AND GRADUATES

204. ADVANCED PARASITOLOGY.—Lectures, readings, and laboratory work, dealing with practical and theoretical problems of classification, morphology and host relations of animal parasites. Offered in alternate years. Prerequisite: Zoology 161. 4 s.h. (E)
ASSOCIATE PROFESSOR HUNTER

219-220. SPECIAL PROBLEMS.—Senior majors who have had proper training may be permitted to carry on special work. Permission must be obtained from the Director of Undergraduate Studies and the instructor under whom the student wishes to work. Not more than 4 s.h. (w & e)
STAFF

222. ENTOMOLOGY.—A study of anatomy, physiology, embryology, and classification of insects. Offered in alternate years. Prerequisite: One year of zoology. 4 s.h. (w)
PROFESSOR GRAY

224. VERTEBRATE ZOOLOGY.—A study of life histories, adaptations, ecology and classification of vertebrate animals. Offered in alternate years. Prerequisite: Zoology 53. 4 s.h. (w)
PROFESSOR GRAY

229. ENDOCRINOLOGY.—The structure, physiology, and embryology of the endocrine glands. Lectures, reading assignments, reports and laboratory work. Prerequisites: Zoology 53, 92. 4 s.h. (w)

238. SYSTEMATIC ZOOLOGY.—The fundamental theory and practice involved in the collection, identification, and classification of animals. Offered in alternate years. Prerequisites: Zoology 1, 2. 4 s.h. (w) ASSISTANT PROFESSOR BAILEY

252. COMPARATIVE PHYSIOLOGY.—The physiological mechanisms of animals studied on a comparative basis. Prerequisite: Zoology 151 or equivalent. 4 s.h. (w) PROFESSOR SCHMIDT-NIELSEN

253. ADVANCED VERTEBRATE MORPHOLOGY.—Lectures, reports, and reading assignments in the comparative morphology of the vertebrates, with particular emphasis on theories concerning the interrelationships of vertebrates and the origin of certain vertebrate structures. Advanced laboratory study of structure in selected groups of vertebrates. Offered in alternate years. Prerequisites: Zoology 53, 92. 4 s.h. (w) ASSISTANT PROFESSOR HORN

271. CELLULAR PHYSIOLOGY.—The physiological processes of living matter approached through studies of cells and tissues. Prerequisites: two years of biology and at least one year of chemistry. 4 s.h. (w) PROFESSOR WILBUR

274. INVERTEBRATE ZOOLOGY.—A study of structure, functions, and habits of invertebrate animals under normal and experimental conditions. Field trips will be made to study, collect, and classify animals in their natural habitats. Offered in alternate years. Prerequisites: Zoology 1, 2. 4 s.h. (w) ASSOCIATE PROFESSOR BOOKHOUT

276. PROTOZOOLOGY.—The morphology, physiology, taxonomy, and culture of protozoa. Offered in alternate years. Prerequisites: Zoology 1, 2. 4 s.h. (w) ASSOCIATE PROFESSOR BOOKHOUT

278. INVERTEBRATE EMBRYOLOGY.—Lectures, readings and laboratory work dealing with rearing, life history and development of invertebrates. Offered in alternate years. Prerequisite: Zoology 92. 4 s.h. (w) ASSOCIATE PROFESSOR BOOKHOUT

For summer courses in Marine Biology consult the Bulletin of the Duke University Marine Laboratory.

RELATED COURSES, ONE OF WHICH MAY BE COUNTED TOWARD A
MAJOR IN ZOOLOGY

BOTANY 101. PRINCIPLES OF HEREDITY.—3 or 4 s.h. (w)

ASSOCIATE PROFESSOR PERRY

BOTANY 202. GENETICS.—4 s.h. (w)

ASSOCIATE PROFESSOR PERRY

DEPARTMENTAL MAJOR

Prerequisites: Zoology 1 and 2.

Major Requirements (for both A.B. and B.S. degrees): A minimum of 24 s.h. of zoology including courses 53, 92, 151 or 271.

Related Work: At least one year of chemistry; additional work usually chosen from courses in botany, chemistry, geology, mathematics and physics.

Language Requirements: For A.B. degree: Preferably German or French. For B.S. degree: Both German and French.

Courses of Instruction College of Engineering



CIVIL ENGINEERING

ASSOCIATE PROFESSOR WILLIAMS, ACTING CHAIRMAN; PROFESSOR HALL; ASSOCIATE PROFESSOR PALMER; ASSISTANT PROFESSORS GARDNER, HAINES AND LEWIS; MESSRS. ARGES,
C. W. BROWN, W. G. BROWN, PIERRY, STOTTLEMYER AND THARP

61. PLANE SURVEYING.—Use of instruments; transit, stadia and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisites: G.E. 1 and Math 6. 4 s.h. (w) Mr. C. W. BROWN AND STAFF

62. ADVANCED SURVEYING.—Simple triangulation; topographic surveying using stadia and plane table; laying out and division of land; public land system; calculations; grading plans and quantities; determination of azimuth by H. O. 211. Prerequisite: C.E. 61. 4 s.h. (w) Mr. C. W. BROWN AND STAFF

108. ADVANCED STRENGTH OF MATERIALS.—Applications of Mohr's circle, deflections, and energy of strain to advanced problems. Prerequisite: G.E. 107. 3 s.h. (w) ASSOCIATE PROFESSOR WILLIAMS

[Offered only upon sufficient demand; enrollment limited.]

S110. PLANE SURVEYING.—The equivalent of C.E. 61 given especially for students in forestry. See *Bulletin of Summer Session*. 4 s.h. (w) Mr. THARP

113. ROUTE SURVEYING.—Thorough drill in the calculation and laying out of simple, compound, and easement curves, widening of curves; vertical curves; setting slope stakes; ordinary earthwork computations and mass diagrams. Prerequisite: C.E. 61. 3 s.h. (w) ASSOCIATE PROFESSOR WILLIAMS

116. HIGHWAY ENGINEERING.—Location, design, construction and maintenance of highways and city streets; soil stabilization; traffic studies; economics of planning and design. Prerequisites: C.E. 113, C.E. 135. 3 s.h. (w)

ASSOCIATE PROFESSOR WILLIAMS

118. MATERIALS OF ENGINEERING.—Study and testing of materials commonly used in civil engineering. The content of course GE 109 and standard tests to determine significant physical properties of cementing materials and aggregates. The design and proportioning of concrete mixtures. Prerequisite: CE 107. 3 s.h. ASSOCIATE PROFESSOR WILLIAMS

121. HYDROLOGY.—Fundamentals of meteorology; precipitation; evaporation. Ground water development. Stream flow and stream gaging. Hydrograph analysis. Flood control. Field trips to be arranged. Prerequisite: G.E. 128. 3 s.h. (w) Mr. STOTTLEMEYER

[Offered only upon sufficient demand; enrollment limited.]

123. WATER SUPPLY AND SEWERAGE.—Statistical analysis of rainfall and run-off records; population estimation; analysis of the yield of watersheds and storage requirement; design of water distribution systems; design of sanitary and storm sewerage systems. Prerequisite: G.E. 128. 4 s.h. (w) Mr. STOTTLEMYER

124. WATER PURIFICATION AND SEWAGE TREATMENT.—Chemical and bacteriological analysis of water and sewage effluents; design of water purification treatment systems; design of sewage treatment plans. Prerequisite: C.E. 123. 3 s.h. (w) MR. W. G. BROWN

128. INDUSTRIAL WATER SUPPLIES.—Water quality for industrial uses. Analytical techniques and interpretation of results. Boiler feed water requirements; softening, ion exchange; deaeration, priming; foaming; corrosion; embrittlement. Control of treatment processes. Prerequisite: Chemistry 1-2. 3 s.h. (w) MR. STOTTMLEYER

[Offered only upon sufficient demand; enrollment limited.]

129-130. ELEMENTARY STRUCTURES.—Stresses in beams and trusses for fixed and moving loads. Deflection of beams and trusses. Design of tension, compression, and flexural members; connections; and plate girders. Design of reinforced concrete beams, slabs, columns, footings, and retaining walls. (For students not majoring in Structural Engineering.) Prerequisite: G.E. 107. 6 s.h. (w)

ASSOCIATE PROFESSOR PALMER

[Offered only upon sufficient demand; enrollment limited.]

131. STRUCTURES.—ANALYSIS AND ELEMENTARY DESIGN.—Stresses in roofs, parallel and inclined chord bridges, including sub-divided panels, by algebraic and graphic methods under all conditions of loading; shear and moments in frames and bents; influence lines: Williot diagram. Structural drafting, details in steel and timber; methods of fabrication and erection. Prerequisites: G.E. 57, 107. 5 s.h. (w)

ASSOCIATE PROFESSOR PALMER

132. STRUCTURES.—DESIGN.—Tension, compression, flexural members, end posts, eccentric connections, unsymmetrical bending; riveted and welded plate girders; trusses and office building frames; wind analysis. Design and detail drawings. Prerequisite: C.E. 131. 5 s.h. (w)

ASSOCIATE PROFESSOR PALMER

133. REINFORCED CONCRETE.—Theory and design of reinforced concrete beams, slabs, and columns including eccentric loads; footings; retaining walls. Prerequisite: G.E. 107. 4 s.h. (w)

ASSOCIATE PROFESSOR PALMER

135. SOIL MECHANICS.—Identification and classification; flow nets; frost action; stability of foundations, cuts and embankments, and retaining walls; settlement. Laboratory includes identification, permeability, shear, unconfined compression, consolidation and compaction tests. Prerequisite: G.E. 107. 3 s.h. (w)

ASSISTANT PROFESSOR GARDNER

137-138. SEMINAR.—Students are required to make reports and to talk on current engineering literature or on such other topics as may be assigned. 2 s.h. (w)

ASSOCIATE PROFESSOR WILLIAMS AND STAFF

[Offered only upon sufficient demand; enrollment limited.]

140. INDETERMINATE STRUCTURES.—Application of least work, slope deflection, moment distribution, and column analogy. Analytic, graphic, and experimental methods are used. Prerequisites: C.E. 131, C.E. 133. 3 s.h. (w)

ASSOCIATE PROFESSOR PALMER

142. HYDRAULIC ENGINEERING.—Statical and dynamical principles of fluids applied to specific engineering problems. Effects of gravity, viscosity, compressibility, and surface tension on fluid motion in closed conduits and open channels; surface and form resistance; dimensional analysis and theory of models. Non-uniform flow in open channels. Hydraulic jump, backwater curves. Hydraulic problems of flood control, flood routing. Dam design. Prerequisite: C.E. 128 or M.E. 105. 3 s.h. (w)

ASSOCIATE PROFESSOR WILLIAMS

[Offered only upon sufficient demand; enrollment limited.]

143-144. PROJECTS IN CIVIL ENGINEERING.—This course may be assigned by the Chairman of the Department to certain seniors who have shown an aptitude for research in one distinct field of civil engineering, in which case it may be substituted for certain general civil engineering courses. 2-6 s.h. (w) STAFF

146. CIVIL ENGINEERING PROBLEMS.—Professional aspects of civil engineering practice. Selected problems in analysis and design, considerations of engineering economy, contracts, specifications, and ethics. Seniors only. 2-3 s.h.

ASSOCIATE PROFESSOR PALMER

ELECTRICAL ENGINEERING

PROFESSOR SEELEY, CHAIRMAN; ASSOCIATE PROFESSOR VAIL, EXECUTIVE OFFICER; ASSOCIATE PROFESSOR MEIER; ASSISTANT PROFESSORS EGERTON, KRAYBILL, AND OWEN;
MESSRS. BOWERS AND THURSTONE

51. SURVEY OF ELECTRICAL ENGINEERING.—A course designed to give the student a general survey of the engineering profession, to define the scope of activities of the electrical engineer, and to provide an introduction to engineering problems. One two-hour computation. 1 s.h. (w) ASSISTANT PROFESSOR KRAYBILL

52. ELECTRIC AND MAGNETIC FIELDS.—An introductory course covering a mathematical and physical analysis of energy relations in electrostatic and magnetostatic fields; resistance, capacitance and inductance of systems of conductors; systems of electric and magnetic units. Two recitations and one two-hour computation. Prerequisites: E.E. 51, Mathematics 52. Physics 52, Mathematics 53 concurrently. 3 s.h. (w) ASSOCIATE PROFESSOR VAIL

101-102. CIRCUITS IN ELECTRICAL ENGINEERING.—A two-semester course covering methods of electric and magnetic circuit analysis applicable in all branches of electrical engineering; alternating and direct currents; the algebra of vectors and complex quantities; networks; nonsinusoidal waves; coupled circuits; transients; polyphase circuits; complex frequency. Prerequisite: E.E. 52. E.E. 107-108 and Mathematics 131 concurrently. 6 s.h. (w) ASSOCIATE PROFESSOR VAIL

105. ELECTRICAL MEASUREMENTS.—A course covering direct-current and low-frequency measurements; the theory, calibration, and use of laboratory standards and of apparatus for the measurement of potential, current, power, and energy; and audio-frequency determination of impedance. Three class sessions and one three-hour laboratory. Prerequisite: EE 52. Mathematics 131 and EE 101 concurrently. 4 s.h. ASSISTANT PROFESSOR OWEN AND MR. THURSTONE

106. ELECTRON TUBES AND CIRCUITS.—A course covering electronic emission, static and dynamic tube characteristics, rectification, glow-discharge tubes, amplifiers, oscillators, and other typical circuits. Three class sessions and one three-hour laboratory. Prerequisites: E.E. 101, E.E. 105, E.E. 107. E.E. 102 and E.E. 108 concurrently. 4 s.h. (w) ASSISTANT PROFESSOR OWEN AND MR. THURSTONE

107-108. CIRCUITS LABORATORY.—A two-semester course designed to provide instruction in electrical laboratory techniques and in the preparation of engineering reports, and to provide experimental verification of the theory of course 101-102, with which it should be taken concurrently. One three-hour laboratory. 2 s.h. (w) ASSOCIATE PROFESSOR VAIL AND MR. BOWERS

123. PRINCIPLES OF ELECTRIC CIRCUITS.—A course designed especially for students in other branches of engineering, covering fundamental electric units and both alternating and direct-current circuits. Three class sessions and one three-hour laboratory. Prerequisites: Mathematics 52 and Physics 52. 4 s.h. (w)

ASSISTANT PROFESSORS KRAYBILL AND EGERTON;
MESSRS. BOWERS AND THURSTONE

124. PRINCIPLES OF ELECTRIC MACHINERY.—A course designed especially for students in other branches of engineering, covering the application of the principles of course E.E. 123 to alternating and direct-current machinery and associated apparatus. Three class sessions and one three-hour laboratory. Prerequisite: E.E. 123. 4 s.h. (w) ASSISTANT PROFESSORS KRAYBILL AND EGERTON; MR. THURSTONE

148. DIRECT-CURRENT MACHINERY.—A study of the principles which underlie the design and operation of all types of direct-current generators, motors, and associated apparatus. Prerequisites: E.E. 101 and E.E. 107. E.E. 102 and E.E. 108 concurrently. 3 s.h. (w) ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

158. **ELECTRIC-POWER SYSTEMS.**—A course providing a brief survey of the electric-power industry followed by a consideration of the economic and engineering features of power plant location and design, and by a study of the apparatus utilized in the generation, transmission and distribution of electric power. Prerequisites: E.E. 148, M.E. 104, and permission of instructor. E.E. 257-258 concurrently. Elective for electrical majors. 3 s.h. (w) PROFESSOR SEELEY

[Offered only upon sufficient demand; enrollment limited.]

159. **TRANSMISSION.**—A development of the theory underlying the transmission of electric energy over conductors at both power and communication frequencies. Two class sessions and one two-hour computation. Prerequisites: E.E. 101-102, E.E. 105, E.E. 106, Mathematics 131. 3 s.h. (w) PROFESSOR SEELEY

161. **HIGH-VOLTAGE PHENOMENA.**—An introductory study of high-voltage phenomena and their engineering applications; behavior of gaps and insulators upon application of power-frequency and impulse voltages; corona; properties of insulating materials; high-voltage measurements; elements of high-voltage design. Two class sessions and one three-hour laboratory. Prerequisites: E.E. 101-102, E.E. 105, E.E. 106, and permission of instructor. Elective for electrical majors. 3 s.h. (w)

ASSOCIATE PROFESSOR VAIL

[Offered only upon sufficient demand; enrollment limited.]

163-164. **ELECTRIC MACHINERY LABORATORY.**—A study of the technique of testing electric machines and a thorough analysis of their performance. Concurrent with E.E. 257-258. One three-hour session, for two semesters. 2 s.h. (w)

ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

165-166. **ELECTRICAL ENGINEERING SEMINAR.**—A course in which seniors are required to present oral reports and dissertations on material appearing in current engineering literature. Juniors may participate, but without credit. 2 s.h. (w)

STAFF

171. **FUNDAMENTALS OF ILLUMINATION.**—A course designed to familiarize the student with some of the factors that influence seeing; to provide a working knowledge of lighting language, sources, and measuring techniques; and to acquaint the student with the basic factors involved in recommended lighting practice. Two class sessions and one two-hour computation. Prerequisites: E.E. 101-102 or E.E. 123, and permission of instructor. Elective. 3 s.h. (w) ASSISTANT PROFESSOR KRAYBILL

[Offered only upon sufficient demand; enrollment limited.]

173-174. **PROJECTS IN ELECTRICAL ENGINEERING.**—A course which may be undertaken only by seniors who show special aptitude, or who may have had previous experience directly related to the proposed project. The consent of the Chairman of the Department must be obtained before registering. Elective for electrical majors. 3-6 s.h. (w)

STAFF

[Offered only upon sufficient demand; enrollment limited.]

180. **RADIO-FREQUENCY TRANSMISSION AND PROPAGATION.**—Theory and application of transmission and propagation at high and ultra-high frequencies; impedance-matching elements; coupling devices; cavity resonators; wave guides and antennas. Two class sessions and one three-hour laboratory. Prerequisites: E.E. 159, E.E. 261, and permission of instructor. E.E. 262 concurrently. Elective for electrical majors. 3 s.h. (w) ASSISTANT PROFESSOR OWEN

[Offered only upon sufficient demand; enrollment limited.]

197. **INDUSTRIAL APPLICATIONS OF ELECTRICAL EQUIPMENT.**—A course of lectures, demonstrations, and recitations designed especially for students in other branches of engineering, dealing with the basic principles of utilization of a wide variety of electrical equipment in industrial practice. Emphasis is on industrial control, motor and generator applications, and electronic devices and applications. Prerequisite: E.E. 124 and permission of instructor. Elective for non-electricals. 3 s.h. (w) ASSOCIATE PROFESSOR MEIER

[Offered only upon sufficient demand; enrollment limited.]

198. **INDUSTRIAL CONTROL.**—This course, open only to students majoring in electrical engineering, consists of a study of the electromagnetic and electronic control of electric motors in industrial applications. Prerequisites: E.E. 101-102, E.E. 106, E.E. 148, E.E. 257, and permission of the instructor. E.E. 258 concurrently. Elective for electrical majors. 3 s.h. (w) ASSOCIATE PROFESSOR MEIER
[Offered only upon sufficient demand; enrollment limited.]

257-258. **ALTERNATING-CURRENT MACHINERY.**—A two-semester course dealing with the theory underlying the design, construction, and operation of synchronous generators, transformers, polyphase induction motors, synchronous motors, single-phase motors of all types, and converters and rectifiers. Prerequisites: E.E. 101-102 and E.E. 148. 6 s.h. (w)
ASSOCIATE PROFESSOR MEIER AND MR. BOWERS

261. **COMMUNICATION ENGINEERING.**—An advanced course dealing with the principles underlying radio communication with special emphasis on the development of methods and procedures for the mathematical analysis of electron tube circuits. Included are vacuum tube amplifiers, oscillators, special electron tube circuits, and introduction to pole and zero studies of response and impedance. Three class sessions and one three-hour laboratory. Prerequisites: E.E. 101-102, E.E. 105, E.E. 106, and Mathematics 131. 4 s.h. (w) ASSISTANT PROFESSOR OWEN

262. **COMMUNICATION ENGINEERING.**—The second half of the course E.E. 261. Included are rectifiers and filters, amplitude and frequency modulation, demodulation, microwave tubes, propagation of radio waves, antennas. Three class sessions and one three-hour laboratory. Prerequisite: E.E. 261. 4 s.h. (w)
ASSISTANT PROFESSOR OWEN

263-264. **OPERATIONAL CIRCUIT ANALYSIS.**—An advanced course covering the mathematical analysis of certain circuits used in electrical engineering, with an introduction to the application of operational calculus to circuit analysis. Prerequisites: E.E. 101-102, Mathematics 131, and permission of instructor. Elective for electrical majors. 6 s.h. (w) PROFESSOR SEELEY
[Offered only upon sufficient demand; enrollment limited.]

MECHANICAL ENGINEERING

ASSOCIATE PROFESSOR KENYON, ACTING CHAIRMAN; PROFESSOR R. S. WILBUR; ASSOCIATE PROFESSOR REED; ASSISTANT PROFESSORS ELSEVIER, FULTON, HOLLAND, AND L. C. WILBUR; MESSRS. MACCONOCHIE, RABIN AND SMITH

52. **KINETICS-MECHANISM.**—Motions of particles. Applications of Newton's *Laws of Motion* to motions of rigid bodies. Work, energy, impulse, and momentum. Linkage, cams, gears, trains of mechanism. Three recitations, three laboratory hours. Prerequisites: G.E. 2, G.E. 57, Mathematics 52. 4 s.h. (w)

ASSISTANT PROFESSORS FULTON, HOLLAND AND L. C. WILBUR; MR. MACCONOCHIE

53. **MATERIALS.**—Mechanical properties of materials; elementary metallurgy; heat treatment, properties and selection of iron, steel, copper, brass, aluminum, plastics, and other common materials. Lectures and recitations supplemented with films and demonstrations. Prerequisite: Chemistry 2. 3 s.h. (w)

ASSISTANT PROFESSOR L. C. WILBUR; MESSRS. MACCONOCHIE AND SMITH

57. **PROCESSES.**—Lectures and recitations covering casting, forging, welding, bending, rolling, drawing, machining, and other common processes. Interchangeable manufacture, metal fits, production methods. Supplemented with films and demonstrations. 2 s.h. (w) ASSISTANT PROFESSOR FULTON AND MR. MACCONOCHIE

101-102. **ENGINEERING THERMODYNAMICS.**—A study of thermodynamic properties and processes of gases, vapor and gas-vapor mixtures; cycles; efficiencies and performance of steam power plant equipment. Three recitations. Prerequisites: Mathematics 52, Physics 52, Chemistry 2. 6 s.h. (w)

PROFESSOR R. S. WILBUR

103-104. HEAT POWER ENGINEERING.—A short course in engineering thermodynamics with applications to power plant design, for C.E. and E.E. students only. Three recitations. Prerequisites: Chemistry 2, Mathematics 52, Physics 52. 6 s.h. (w)

ASSOCIATE PROFESSOR REED; ASSISTANT PROFESSORS
FULTON AND L. C. WILBUR

105. FLUID MECHANICS.—Fluid statics; kinematics of fluid flow; application of fluid dynamics theory to flow through orifices, weirs, and pipes; general principles of centrifugal pumps and turbines. Prerequisites: Mathematics 52, Physics 52. 3 s.h. (w)

ASSOCIATE PROFESSOR KENYON

106. HEAT TRANSFER.—Conduction, radiation and convection; heat transfer to boiling liquids or condensing vapors; over-all transfer of heat, steady state or variable flow. Applications to heat power, heating and air conditioning, and refrigeration. Prerequisites: M.E. 101 or 103, M.E. 105 or G.E. 128, M.E. 102 or 104 concurrently. May be elected by limited number of C.E. and E.E. students. 3 s.h. (w)

ASSOCIATE PROFESSOR REED

108. AERONAUTICS.—A general course applying fluid mechanics principles to airfoils, propellers, and the complete airplane. Prerequisite: M.E. 105. 3 s.h. (w)

ASSISTANT PROFESSOR ELSEVIER

113-114. JUNIOR MECHANICAL ENGINEERING LABORATORY.—Open only to mechanical engineering students. First semester, three laboratory hours, devoted to experiments and reports in hydraulics, flue gas analyses, calorific value of fuels. Second semester, six laboratory hours, devoted to experiments and reports related to thermodynamics, such as boiler inspection, air compression, injectors, steam and fuel calorimetry. M.E. 101-102 concurrently. 3 s.h. (w)

STAFF

115-116. JUNIOR MECHANICAL ENGINEERING LABORATORY.—Open only to electrical and civil engineering students. Experiments and reports on measuring instruments and apparatus, flow of air, steam and water, economy of boilers, steam and internal combustion engines. Three laboratory hours. M.E. 103-104 concurrently. 2 s.h. (w)

STAFF

150-151. MACHINE DESIGN.—Application of principles of mechanics, strength of materials, constructive processes and engineering drawing to the design of bolted, riveted and welded connections, pressure vessels and machine elements, followed by design of at least one complete machine. M.E. 150 has two recitations and three laboratory hours; M.E. 151 has two recitations and six laboratory hours. Prerequisites: G.E. 107, M.E. 52, M.E. 53, M.E. 57. 7 s.h. (w)

ASSISTANT PROFESSOR HOLLAND AND MR. MACCONOCHIE

153-154. HEATING, AIR CONDITIONING AND REFRIGERATION.—Determinations of heat losses and gains; design of steam, hot water and warm air heating and air conditioning systems; panel heating. Fundamentals of refrigeration theory and design. Applications of refrigeration to summer and year round air conditioning commercial and industrial applications of refrigeration. Prerequisite: M.E. 106. M.E. 159-160 concurrently. Two recitations, three laboratory hours. 6 s.h. (w)

ASSOCIATE PROFESSOR REED

155. INTERNAL COMBUSTION ENGINES.—Principal cycles; fuels and fuel mixtures; effect of real mixtures on theoretical cycles; combustion; carburetion and fuel injection. Thermodynamic analysis of engine performance. Modern developments in the internal combustion engine. Three recitations. Prerequisite: M.E. 101-102. 3 s.h. (w)

ASSISTANT PROFESSORS ELSEVIER AND FULTON

157 CENTRIFUGAL PUMPS AND BLOWERS.—A study of the basic principles of design, construction and application of centrifugal pumps and blowers. May be elected by a limited number of mechanical engineering seniors with consent of Chairman of Department. Prerequisite: M.E. 105. 3 s.h. (w)

ASSISTANT PROFESSOR FULTON

[Offered only upon sufficient demand; enrollment limited.]

158. INDUSTRIAL ENGINEERING.—A study of the industrial growth and present tendencies of productive industries as concerns the engineer. Specific topics treated are: plant location, organization, production and cost controls, wage payment, etc. *Seniors only*. Three recitations. 3 s.h. (w)

ASSOCIATE PROFESSOR KENYON AND MR. SMITH

159. SENIOR MECHANICAL ENGINEERING LABORATORY.—Tests and reports on performance and economy of internal combustion engines, steam engines and turbines; heat transfer, radiator tests, and energy balances. Required of all seniors in mechanical engineering. Six laboratory hours. Prerequisite: M.E. 114. M.E. 153 concurrently. 2 s.h. (w)

STAFF

160. SENIOR MECHANICAL ENGINEERING LABORATORY.—Required of all seniors in mechanical engineering. Tests and reports on boiler, engine, turbine, condenser and accessories; heat transfer; refrigeration equipment. Six laboratory hours. Prerequisite: M.E. 159. M.E. 154 and M.E. 162 concurrently. 2 s.h. (w)

STAFF

162. POWER PLANT CALCULATIONS.—Study of economic and engineering factors in developing steam power plants. Consideration of the performance of boilers, prime movers, condensers and various auxiliaries in various groupings as they affect the plant heat balance. May be elected by a limited number of C.E. or E.E. students. Three recitations. Prerequisite: M.E. 102 or 104. M.E. 160 concurrently. 3 s.h. (w)

PROFESSOR R. S. WILBUR

164. ENGINEERING ANALYSIS.—A study of a series of engineering problems with particular reference to mathematical and graphical methods of solution and engineering interpretation of results. 3 s.h. (w)

ASSISTANT PROFESSOR L. C. WILBUR

[Offered only upon sufficient demand; enrollment limited.]

166. AIR-CONDITIONING DESIGN.—Analysis of air-conditioning requirements, summer and winter, commercial and industrial. Design of systems and units, and selection of equipment. Open to seniors who have completed M.E. 153. 3 s.h. (w)

ASSOCIATE PROFESSOR REED

[Offered only upon sufficient demand; enrollment limited.]

197-198. PROJECTS IN MECHANICAL ENGINEERING.—This course may be assigned by the Chairman of the Department to certain seniors who express a desire for such work and who have shown aptitude for research in one distinct field of mechanical engineering. Elective credit for either semester. 3-6 s.h. (w)

STAFF

GENERAL ENGINEERING

STAFF

1. ENGINEERING DRAWING.—The study of mechanical drawing with emphasis on third angle projection, pictorial drawing, dimensioning, working drawings, pencil and ink techniques. 2 s.h. (w)

ASSISTANT PROFESSORS HAINES AND LEWIS

2. DESCRIPTIVE GEOMETRY.—A study of drawing board geometry with emphasis on line and plane problems, developments, and intersections. Further emphasis on drawing techniques. Prerequisite: G.E. 1. 2 s.h. (w)

ASSISTANT PROFESSORS HAINES AND LEWIS

57. STATICS.—Concurrent forces, parallel forces, nonconcurrent and nonparallel forces, centroids, friction, moment of inertia. Prerequisite: G.E. 1. Mathematics 52 concurrently. 3 s.h. (w)

STAFF

58. DYNAMICS.—Translation, rotation, work, energy, and momentum. Prerequisites: G.E. 57 and Mathematics 52. 3 s.h. (w)

ASSISTANT PROFESSOR GARDNER

107. STRENGTH OF MATERIALS.—Elastic bodies under stress; flexure of simple, overhanging, fixed, and continuous beams; columns; combined stresses, etc. For Civil Engineering students, the laboratory work is included in course C.E. 118. Other students should take course G.E. 109 for laboratory. Prerequisites: G.E. 57, Mathematics 52. 3 s.h. (w)

ASSOCIATE PROFESSOR PALMER AND STAFF

109. **STRENGTH OF MATERIALS LABORATORY.**—Study and use of testing machines and strain gages. Tests to determine significant physical properties of the common engineering materials. Experimental verification of the elementary theory of structural members. Must be preceded or accompanied by G.E. 107. 1 s.h.

MR. ARGES

128. **HYDRAULICS.**—Elementary principles of hydromechanics. Application to engineering problems of hydrostatics and of the principles of energy, continuity, and momentum relating to flow. The effects of gravity and viscosity on fluid motion. Dimensional analysis and dynamic similarity; hydraulic measuring devices; steady flow in closed conduits and in open channels. Prerequisite: G.E. 58 or M.E. 52. 3 s.h.

ASSOCIATE PROFESSOR WILLIAMS

Student Life and Activities



CONDUCT AND DISCIPLINE: The University expects of its students loyal and hearty cooperation in developing and maintaining high standards of conduct as well as of scholarship. The University therefore reserves the right, and matriculation by the student is a concession of this right, to ask the withdrawal of any student whose conduct at any time is not satisfactory to the University, even though no specific charge be made against the student.

General oversight of the conduct of students and the administering of discipline are under the supervision of the Vice-President in the Division of Student Life. The duty of immediate supervision, guidance, and control of the students in each college is entrusted to the dean of that college. However, through the expressed willingness of the students of the University to assume the responsibility of maintaining high standards of morals and honor, the student body has properly become to a great degree self-governing. Two councils, one of men and the other of women, each composed of duly elected representatives of the student body, exercise the authority granted the students for their respective colleges to investigate all cases of misconduct, as well as all other cases of violation of proper student standards and traditions, and to make recommendations of penalties based on their findings.

The student councils have been helpful to the administrative authorities of the University. They exert a guiding and stimulating influence for the promotion of high ideals of conduct and of student relationships.

ASSEMBLY AND CLASS MEETINGS: The sophomore, junior and senior classes of Trinity College and the College of Engineering meet on call to discuss matters pertinent to the individual group. The freshman classes of these colleges hold weekly meetings with compulsory attendance.

In the Woman's College an assembly of all students is held on the first and second Monday evenings; house meetings are held on third Monday evenings; and class meetings, with the exception of the freshman class, are held on fourth Monday evenings. The freshmen meet as a class each week. In each instance, attendance is required.

AUTOMOBILE REGULATIONS: Freshmen are not permitted to own or operate motor vehicles at the University. Members of other classes in Trinity College and the College of Engineering are permitted

to operate motor vehicles provided they are registered and operated in accordance with University regulations; under the same conditions seniors in the Woman's College may use cars.

SCHOLASTIC REGULATIONS FOR PARTICIPATION IN ATHLETIC AND OTHER ACTIVITIES: A student who receives less than a passing grade on more than six hours of his required work of the preceding term is ineligible to represent the University in any athletic contest, concert, or other public event.

Members of athletic teams or other student groups engaging in public representation of the University are expected to be carrying their current work satisfactorily. A student may be barred from participation in such representation if, in the opinion of the dean, he fails to meet this requirement.

RELIGIOUS LIFE: "Eruditio et Religio," the motto emblazoned on the seal of the University, proclaims belief in the essential union of knowledge and religion in the educational process. Provisions, both academic and extra-curricular, are made for the realization of this aim. Academic offerings in the field of Religion are described elsewhere in this catalog. The description below concerns non-academic provisions.

The Gothic Chapel stands at the center of the campus, an inspiring symbol of the place of religion in the well-balanced life. This is the home of the Duke University Church, Interdenominational. The Church encourages the cultivation of the spiritual and moral life of students through participation in a program of varied activities.

The Service of Worship on Sunday morning has special appeal. Several hundred students participate in these services by singing in the choir, which has gained national reputation. At least one hundred other students aid in special ways, as ushers, collectors, and assistants at communion services. Hundreds come to worship and are inspired by the beauty and challenge of these services.

But the Church also encourages the students to translate their worship into effective Christian living. A rich program of activities is offered, so that every student can find something that will challenge his interests and meet his needs as an active member of his faith.

These activities are developed along three lines: interfaith, interdenominational, and denominational. Protestant, Jewish, and Roman Catholic students are organized in their respective groups; but periodically they join together in interfaith programs which are carefully planned to respect the traditions of the various faiths. Interdenominational activities for all Protestant students are emphasized because it is believed that a more complete Christian faith is developed through sharing knowledge and fellowship with Christians of other churches.

Vital to the religious life at Duke are the various church groups

known on the campus as the Protestant Denominational Groups. The Church looks to these organizations, under the leadership of their respective chaplains or advisers, to provide a continuing denominational experience through worship, study, service activities, and recreation. The promotion of churchmanship as a part of the total educational experience at Duke is designed to equip students to assume the role of leaders in their local church when they leave the University.

Additional features of the program are the organ recitals and special musical services which are given from time to time on Sunday afternoons in the Chapel. During the summer, carillon recitals are presented twice a week.

The total religious program is under the direction of the Official Board of the Church, composed of an equal number of faculty-staff members and students. Professional guidance is given by the Preacher to the University, the Chaplain to the University, the Choir Director and the Organist, the Associate Directors of Student Religious Life, and the denominational Chaplains.

PUBLIC LECTURES AND SOCIAL FUNCTIONS: The Faculty Council on Public Lectures supervises all public lectures, addresses, and other public events given under the auspices of the University or of any organization in any way connected with the University. All dates and programs must be approved by the Council, which prepares an official yearly calendar. Current announcements of public occasions appear in the Weekly Calendar of Duke University issued by the Department of Alumni Affairs.

A social committee composed of students and staff members from the undergraduate colleges exercises general supervision over major social functions. The executive officers of the committee are the Dean of Men and the Dean of Undergraduate Women.

MEDICAL CARE: With the exceptions noted below, full medical and surgical care is furnished to all regularly matriculated students of the University. The cost is included in the general fee paid each semester and in the fees charged each student in the summer quarter*

The service is under the direction of the University Physician with the cooperation of the Staff. It includes hospitalization in Duke Hospital, as deemed necessary by the Hospital Staff but limited to thirty days; medical and surgical care under the supervision of a senior physician or surgeon; drugs, X-ray work, and ward nursing. Special nursing is not covered. The student pays for his board while in the hospital. Refraction of eyes, treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernias, pilonidal cysts and other elective surgery, chronic skin conditions, endocrine

* Only those students who have paid the fee for the semester, quarter or summer session during which illness occurs are entitled to the services described herein.

disturbances, etc., and accidents or illnesses occurring during vacations or while off the campus, are not included in this service. The cost of any necessary braces and orthopaedic appliances, as well as of special nursing, must be borne by the student and blood used for transfusions must be paid for or replaced. If the student has insurance providing hospitalization, surgical, or medical benefits, the benefits shall be applied to the cost of his medical care.

Advisory consultation with a Psychiatrist at no expense is available to students through referral either by the Student Health Physicians or by the Deans but office visits for psychotherapeutic interviews cannot be included in this service.

A woman physician is in residence and a nurse in constant attendance at the Woman's College Infirmary. Patients in this Infirmary can be transferred to the Duke Hospital at any hour of the day or night. Male students receive ambulant care at the student health office in the hospital building during dispensary hours. Men are admitted to the hospital directly whenever necessary. The emergency service and the specialist consulting services of the Hospital and Medical School are always available.

When the student comes to the University, he is given a careful physical examination. Any physical defects are recorded along with the record of the questionnaire from the family physician. All students are requested to be successfully vaccinated against smallpox before admission to the University. It is urgently advised that they take typhoid vaccine if they have not done so within three years, and that all male undergraduates be actively immunized to tetanus by injections of toxoid.

PHYSICAL EDUCATION: Students of Trinity College and the College of Engineering are required to engage in some type of physical activity for two years or four full semesters. This work consists of participation in natural, practical, physical activity for at least three one-hour periods each week. The purpose is to improve body control and strength through big muscle activities, to stimulate the development of mental and physical alertness, to establish habits of regular exercise, and to give training and experience in various kinds of recreational sports that will be indulged in after the student is graduated from the University.

Intramural sports are promoted and fostered in all phases of athletic activity. Meets, tournaments, and leagues are seasonally organized in the different sports. All students of the two colleges are eligible to enjoy the intramural privileges, provided they comply with the intramural rulings. Participation in these activities is entirely voluntary, but they are very popular because they provide an opportunity for every man to enter into competition and recreation in those sports which he enjoys most.

The work of the Physical Education Department of the Woman's College is designed in part to give the students of that college an appreciation of the value of activity for general physical well-being, skill in one or more activities which can be enjoyed as recreation during and after college, a well-developed and well-coordinated body, and a knowledge of good posture and efficient handling of the body in everyday activities. To this end, students are allowed to choose from a large number of activities including individual, dual, and team sports, swimming, and several types of dancing. In order to insure a variety of skills, each student, during her three years of required physical education, must elect one semester's work in each of the following types of activity: individual or dual sports, and dance. All students who are unable to pass the swimming test must take one semester of swimming before graduation. At the mid-point in the fall semester of the freshman year, the activity course ends and all freshmen take one period a week of body mechanics and one of social hygiene for the remainder of the semester.

The Dance Group, the Swimming Club, and the other sports clubs run by the Woman's Athletic Association give opportunities for all students to take part in the types of intramural activities most interesting to them. The swimming pool, tennis courts, and other athletic equipment are available to all students for use at specified times.

In order to meet certain hygienic aspects of physical education and intramural athletics, the University has made available for all students, in addition to facilities for physical activity and recreation, the following equipment and services:

1. (a) MEN. A regulation uniform: shirt, trunks, supporter, socks, sweat clothes, and towel.
- (b) WOMEN. Gym suit, dance costume, bathing suit, warm-up suit.
2. Provision for locker and handling of uniform.
3. The laundering of uniform and towel as needed.

The privileges and services listed above are available to all students who pay full fees, as long as they comply with the rules and regulations established for the care and handling of the equipment.

THE INTERCOLLEGIATE ATHLETIC PROGRAM: The program, controlled entirely by the University, consists of the organization and training of representative freshman and varsity teams in football, basketball, track, cross country, golf, gymnastics, lacross, soccer, swimming, tennis, and wrestling.

The program is under the supervision of the Athletic Council, composed of seven members. Three of the seven are appointed from the faculty as follows: one member from the Officers of General Administration, one from the Officers of Educational Administration, division of the Colleges, and one from the Officers of Instruction of the undergraduate colleges. From this group the President of the

University appoints the faculty chairman, who serves as chairman of the Athletic Council and of its executive committee.

Four of the seven members are selected from the alumni. One of the four, a University Trustee, an alumnus, and a member of the Board's standing Committee on Physical Education and Athletics, is appointed not less frequently than every three years by the chairman of the Board of Trustees. The remaining three, who may not succeed themselves, are elected annually by the general Alumni Association for terms of three years. The Director of Alumni Affairs serves *ex officio* as secretary of the Council and of the executive committee.

The three faculty members of the Athletic Council constitute a committee which alone has the responsibility of enforcing the scholarship and athletic requirements of the University for participation in intercollegiate sports. The athletic eligibility rules are those of the Atlantic Coast Conference.

The executive committee of the Athletic Council is composed of the faculty chairman of the Council, one other faculty member of the Council and one alumni member of the Council. The executive committee of the Council recommends to the President of the University persons to serve as Director of Athletics and as coaches in the various sports. The election of such persons, however, rests solely with the Board of Trustees of the University or with its Executive Committee on recommendation of the President of the University. The executive committee of the Council recommends to the Athletic Council athletic schedules and the award of insignia of merit earned by members of the athletic teams. However, decisions with respect to the same rest solely with the Athletic Council subject to approval of the President.

Each of the four undergraduate classes selects annually, for terms of one year, a member of each respective class to serve in an advisory capacity to the Athletic Council upon call of the faculty chairman on the matter of awarding insignia of merit.

All funds arising from athletics are handled entirely by the Treasurer of the University. An audit of the receipts and disbursements of these funds is made annually by the official auditors of the University and a report thereof made annually to the Executive Committee of the Board of Trustees.

THE STUDENT ACTIVITIES OFFICES: The Student Activities Offices were established for the purpose of assisting and coordinating the financial activities of the various student organizations in Trinity College, the College of Engineering, and the Woman's College.

The Offices provide for student organizations a banking service through the office of the Treasurer of the University. They also afford auditing services for organizations requiring it. Permanent records of all financial activities of organizations are kept under the supervision of the Offices. The Student Activities Offices, cooperating with

the University Purchasing Department, also serve in the capacity of purchasing agent for affiliated student organizations. There is no charge for this service.

In addition to these specific services, the purpose of the Office is to promote well-organized and effective extracurricular interest.

Student Activities Offices for Trinity College and the College of Engineering are located on the West Campus, and for the Woman's College, on the East Campus.

STUDENT PUBLICATIONS: Student publications of the University are under the control of a Publications Board, which is constituted as follows: three members from the University staff and two from the alumni, appointed by the President; six men from the junior and senior classes, elected by the students in Trinity College and the College of Engineering; four women from the junior and senior classes, elected by the students in the Woman's College; and four editors and four managers of student publications, *ex officio* members without voting power. No student publications can be started at the University without the approval of the Council.

The four publications of campus-wide interest are the *Archive* (monthly); the *Chanticleer* (annual); the *Chronicle* (semiweekly); *Duke Peer*. The Engineering students issue a professional bimonthly magazine, the *DukEngineer*.

STUDENT BROADCASTING SYSTEM: The student broadcasting system of the University is under the control of a Radio Council, which is constituted as follows: two members from the University staff, appointed by the President; three members from the faculty who serve as engineering, production, and business advisers; three men from the junior and senior classes, including one engineer, elected by the students in Trinity College and the College of Engineering; one woman from either the junior or senior class, elected by the students of the Woman's College; one man from either the junior or senior class, elected by the members of the Student Legislature of the Men's Student Government Association from within the membership of that body; one woman from either the junior or senior class, elected by the members of the Woman's Student Government Council from within the membership of that body; and four student managers of the student broadcasting system, *ex officio* members without voting power.

STUDENT ORGANIZATIONS: The following organizations are active on the campus: *The Men's Student Government Association of Duke University* comprises all men students in Trinity College and the College of Engineering. Through its officers and a council it initiates policies and oversees matters within the control of the student body. The council is composed of nine members: three executive

officers, two representatives from the senior class, two from the junior class, one from the sophomore class, and one from the College of Engineering.

The Woman's Student Government Association is similar in character to the men's association. Its council is composed of the officers of the Association, house presidents, house judicial representatives, and president of the Town Girls' Club, class representatives, and chairman of the Freshman Advisory Council, *ex officio*.

The Young Men's Christian Association and the *Young Women's Christian Association* are branches of the national student Christian Associations. Each body aims to enrich not only the religious life of its members as individuals but also to promote religious group activity. These organizations carry on extensive activity in the fields of social service, faculty-student relations, forums, and other related projects. Membership in the Student Religious Council relates these organizations to the total religious activities program of the Duke University Church, Interdenominational.

Other organizations and activities include the following: Air Force Club; Arnold Air Society; Bench and Bar Society (Pre-Legal Undergraduates); Class of 1954; Class of 1955; Class of 1956; Class of 1957; Classical Club (Men); Club Panamericano; Commodore Club (N.R.O.T.C. Social Organization); Debate Council; Duke-Charlotte Club; Duke Independent Society (Men); Duke Players; Duke Square Dance Club; Duke University Church (Interdenominational); Duke University Handbook, and Directory; Engineers' Club; G. O. Politan Club; Graduate Club; Hoof 'n' Horn; Interfraternity Council; Intramural Athletic Department; Men's Freshman Advisory Council; Pegram Chemistry Club; Pep Board; Photography Club; Pre-Medical Society; Publications Board; Quadrangle Pictures; Shoe and Slipper Club; Spring Frolic Fund; Student Religious Council; Town Boys' Club; Town Girls' Club; Woman's College Student Forum; Women's Athletic Association; Women's Freshman Advisory Council; Women's Pan-Hellenic Council; Young Democrats Club; and the Campus Chest Fund.

The following honorary orders and fraternities have chapters on the campus: National—Alpha Kappa Psi (Economics); Alpha Phi Omega (Scouting); Chi Delta Phi (Literary); Delta Phi Alpha (German); Eta Sigma Phi (Classics); Kappa Chi (Pre-Ministerial); Kappa Delta Pi (Educational); Mu Sigma (Psychology); Omicron Delta Kappa (Leadership—Men); Phi Beta Kappa (Scholarship); Phi Eta Sigma (Freshman Scholarship—Men); Phi Sigma (Biology); Pi Gamma Mu (Social Science); Pi Mu Epsilon (Mathematics); Sigma Delta Pi (Spanish) Sigma Pi Sigma (Physics); Sigma Xi (Science); Tau Kappa Alpha (Forensic); Tau Phi Omega (French).

Local—Ivy (Scholarship—Freshmen Women); Delta Phi Rho Alpha

(Athletic—Women), Varsity "D" Club (Athletic—Men); Beta Omega Sigma (Leadership—Sophomore Men); Sandals (Leadership—Sophomore Women); Phi Kappa Delta (Leadership—Women); Red Friars (Leadership—Senior Men); White Duchy (Leadership—Senior Women).

Engineering (Professional)—American Institute of Electrical Engineers; the American Society of Civil Engineers; and the American Society of Mechanical Engineers. Engineering (Honorary)—Tau Beta Pi (National Honorary Engineering Fraternity); Eta Kappa Nu (Electrical Engineering National Honorary Society); Pi Tau Sigma (Mechanical Engineering National Honorary Society); Order of St. Patrick (Leadership).

Local musical organizations available to qualified members are: Chamber Orchestra; Concert Band; Madrigal Singers; Marching Band (Men); Men's Glee Club; Music Study Club; Symphony Orchestra; University Chapel Choir; Women's Glee Club.

The following national social fraternities have chapters on the campus: Alpha Tau Omega; Beta Theta Pi; Delta Sigma Phi; Delta Tau Delta; Kappa Alpha; Kappa Sigma; Lambda Chi Alpha; Phi Delta Theta; Phi Kappa Psi; Phi Kappa Sigma; Pi Kappa Alpha; Pi Kappa Phi; Sigma Alpha Epsilon; Sigma Chi; Sigma Nu; Sigma Phi Epsilon; Tau Epsilon Phi; Theta Chi; Zeta Beta Tau.

The following national social sororities have chapters on the campus: Alpha Chi Omega; Alpha Delta Pi; Alpha Phi; Alpha Epsilon Phi; Delta Delta Delta; Delta Gamma; Kappa Alpha Theta; Kappa Delta; Kappa Kappa Gamma; Phi Mu; Pi Beta Phi; Sigma Kappa; Zeta Tau Alpha.

Honors and Prizes



HONORS: To be eligible for Honors a student must earn, during the year, credit for at least the normal load of the college in which he is registered. All semester hours on which a student receives a grade are counted in the determination of Honors. Students in the freshman, sophomore, and junior classes who earn an average of at least two and one-half quality points per semester hour are given Honors.

The degree of Bachelor of Arts or of Bachelor of Science with distinction is conferred in accordance with the following rules:

To be eligible for general Honors at graduation a student must have completed in residence a minimum of ninety semester hours. Those students who earn an average of at least two and one-half quality points per semester hour are recommended for a degree *magna cum laude*. Those who earn an average of at least two and three-fourths quality points per semester hour are recommended for a degree *summa cum laude*.

MEDALS AND PRIZES: *The Wiley Gray Medal* was established by the late Robert T. Gray, Esq., of Raleigh, North Carolina, to be awarded annually in memory of his brother. It is given for the graduating oration that shall be, in the opinion of a committee, the best, with respect to both declaration and composition.

The Debate Council authorizes the awarding of medals to members of the graduating class who have represented the University in at least two intercollegiate debates. The medals are given by the local chapter of the Tau Kappa Alpha Fraternity.

The Robert E. Lee Prize is the gift of The Reverend A. W. Plyler, of the Class of 1892, and Mrs. Plyler. The sum of \$50 is awarded annually at Commencement, preferably to that member of the senior class of Trinity College or the College of Engineering who, in character and conduct, in scholarship and athletic achievement, in manly virtues and capacity for leadership, has most nearly realized the standards of the ideal student. The dean of the college, the Graduate Manager of Athletics, and the President of the Student Council constitute a committee to draft and adopt regulations governing the award.

Alpha Kappa Psi Medallion. Beta Eta Chapter of Alpha Kappa Psi, a professional fraternity in commerce, awards annually the Alpha Kappa Psi Scholarship Key to the male senior student pursuing a degree in the Department of Economics and Business Administration

who has attained the highest scholastic average for three years of collegiate work in this University.

Medal of the North Carolina Association of Certified Public Accountants. The North Carolina Association of Certified Public Accountants annually awards a medal to the senior who, in the judgment of his instructors, is the most outstanding student in accounting in his graduating class.

Julia Dale Prize in Mathematics. This is a prize of books given annually to the undergraduate who shows the greatest proficiency in the study of calculus.

The Milmow Prize, consisting of one year's subscription to the *Electrical World*, is awarded each year to that student from North or South Carolina graduating in the Department of Electrical Engineering who, in the opinion of the faculty of that department and as shown by his grades, has made the most progress in electrical engineering during his last year in college.

The Tau Beta Pi Prize. The North Carolina Gamma chapter of Tau Beta Pi, national honorary engineering fraternity, awards each year a suitable prize, such as an engineering handbook, to a sophomore student in engineering for outstanding scholastic achievement during the freshman year.

The Phi Lambda Upsilon Prize. Phi Lambda Upsilon, honorary chemical society, yearly awards a suitable prize to an outstanding junior who is majoring in chemistry. The recipient's name is inscribed on a plaque displayed in the Chemistry Library.

The Pegram Chemistry Club Prize is awarded in the spring of each year for scholarship in chemistry, physics, and mathematics. The prize consists of a one-year junior membership in the American Chemical Society and a one-year subscription to either the *Journal of the American Chemical Society* or *Industrial and Engineering Chemistry*. To qualify for this prize, the student must (1) be enrolled as an undergraduate of Duke University and (2) be taking or have taken a fourth-year chemistry course. The winner of this prize is selected by a committee consisting of at least one faculty member and at least two members of the Pegram Chemistry Club; the selection is based on the quality-point average for all courses taken in chemistry, physics, and mathematics. In case of a tie equal awards are given.

The Sigma Xi Prize. The Society of the Sigma Xi, honorary scientific society, is devoted to the encouragement of scientific research, and seeks to stimulate those who show promise of accomplishment in scientific research. As an encouragement to younger men and women the Duke Chapter of Sigma Xi has established the following prizes to be awarded annually to students resident at Duke University: \$20.00 for an undergraduate project or paper, \$20.00 for a Master's thesis or its equivalent, and \$40.00 for a Ph.D. dissertation or its

equivalent. Nominations, recommendations, copies of theses, reports or other material must be in the hands of the Secretary of the Chapter on or before May 5.

The Erasmus Club Prize in the Humanities. The Erasmus Club, founded in 1925, a group of Duke faculty members interested in research in language, literature, and the arts, seeks to stimulate interest and study in these fields. To encourage Duke students in this field, the Erasmus Club has established an annual prize amounting to \$25.00, for the best original essay by an undergraduate which embodies the results of research, criticism, or evaluation in some subject in the humanities. Prospective competitors should consult some member of the faculty, preferably their major professor. Essays must be type-written and must be submitted to the president of the club before the first of April. The club reserves the right to withhold the prize in case there are no essays of acceptable quality.

The Anne Flexner Memorial Award in Creative Writing has been established by the friends of the family of Anne Flexner, who graduated from Duke in 1945. It consists of fifty dollars in cash and a book bearing the Anne Flexner Memorial Award bookplate. The award is given annually for the best piece of creative writing submitted by a Duke undergraduate. The competition is limited to short stories (5,000-word limit), one-act plays (5,000-word limit), poems (100-line limit), and informal essays (3,000-word limit). Only one manuscript may be submitted by a candidate, and manuscripts must be delivered to the English Office, Room 2G5, West Duke, before April 15.

The William Senhauser Prize is given by his mother in memory of her son, a member of the Class of 1942, who lost his life in the Pacific Theatre of War on August 4, 1944. The award is made annually to the sophomore or junior in Trinity College or the College of Engineering who has made the greatest contribution through participation and leadership in intramural sports. The winner of this prize is chosen by a committee selected by the President of the University.

The *Friends of Duke University Library* offer three prizes of \$25.00, \$15.00, and \$10.00, in an annual contest open to all undergraduate students for the best book collections acquired during their college years. The contest is supervised by the Undergraduate Committee of the Friends of the Library, which announces each fall the terms of the award. Inquiries may be directed to the Curator of Rare Books. Collections entered in the contest are exhibited each spring in the General Library, and the prizes are awarded on the basis of the student's collection and a personal interview to determine the overall planning and objectives of his collecting activity, and his familiarity with his own books and the general field of his collecting interest.

THE GRADUATE SCHOOL OF ARTS AND SCIENCES

Fall Semester begins September 23, 1954

Spring Semester begins February 2, 1955

Admission



TO GRADUATE SCHOOL. Admission may be granted to a student who has received an A.B. or B.S. degree from an accredited institution after a four-year course of study. The undergraduate record should be well-rounded and of such quality as to give positive evidence of capacity for success in graduate study.

Before admission can be granted, the student must submit for appraisal the following documents: (a) An official transcript of all his college or graduate work, to be forwarded directly from the Registrar of his college to the Dean of the Graduate School at Duke University. (b) Two or three letters of recommendation, to be furnished by persons best qualified to judge the applicant as a prospective graduate student. According to a ruling of the Graduate School Faculty the following policy will be followed with respect to scores on the Graduate Record Examination: (a) If a student has already taken this examination, he must submit his scores for consideration by the Admissions officer; (b) under certain circumstances the Admissions officer may ask for scores on this examination before final decisions are made on the admission of the applicant; (c) the departments of Biochemistry, Economics, English, and Psychology require the submission of these scores before final decisions are made on full admission to the Graduate School. If the other documents of the applicant are satisfactory, he may be granted "provisional" admission until the Graduate Record Examination scores are submitted and accepted. Arrangements to take this examination can usually be made through officials of the student's college, or by correspondence with the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

APPLICATION PROCEDURE. A student desiring admission to the Graduate School, should request official application blanks from the Dean. These should be filled out fully and returned at the earliest moment. The other documents needed to complete the application, namely, transcripts, letters of recommendation, and Graduate Record Examination scores, must be forwarded directly from the institutions or individuals to the Dean of the Graduate School. In no case will such documents be accepted from the student.

The application and all supporting documents should be submitted to the Dean of the Graduate School not later than August 1 by those applying for the fall semester, or January 1 by those applying for the spring semester. Applications received later than these dates cannot

be accorded the same review or consideration as those received earlier. It is the student's responsibility to make certain that his application is complete and in order before the dates specified.

When the application is accepted and approved, the student will receive a letter of admission, giving the date by which he must notify the Dean of the Graduate School of his intention to enroll for the term for which he is granted admission.

Admission, once granted, is valid only for the term or year specified. Should a student be unable to enter the Graduate School at that time but wishes later to be admitted to a subsequent term, he must re-apply for admission, following the usual procedure. But he need only bring his application up to date, if he re-applies within two years of the date when he was first admitted.

Registration

Once the student has received notification of his admission to the Graduate School, but not until then, he may present himself for registration. During the registration periods, announced in the *Bulletin*, he first confers with the Director of Graduate Studies of his major department, who prepares an Approval Card, listing the course work to be taken during the semester. The student then presents this Approval Card to the Graduate School, which enrolls him officially in his courses.

WHO MUST REGISTER. (1) All students who enter course work or residence for credit; (2) all students who have completed minimum requirements for the Ph.D. degree, but are using in their research the facilities of the University; (3) all students who wish merely to "audit" a course or courses.

LATE REGISTRATION. All students are expected to present themselves for registration at the time stated in the *Bulletin*. *Those registering after the close of the announced registration period will be charged a late registration fee of five dollars.*

Degrees Offered



THE Graduate School of Arts and Sciences now offers the following degrees: The Master of Arts (A.M.), The Master of Education (M.Ed.), The Master of Arts in Teaching (M.A.T.), The Doctor of Philosophy (Ph.D.), and The Doctor of Education (Ed.D.).

Regulations Concerning Master's Degrees

RESIDENCE REQUIREMENTS. Candidates for all Master's degrees must spend, as a *minimum*, one full academic year in residence at Duke University. Often more time will prove necessary, depending upon the nature of the student's research problem and upon the student himself. Students who wish to complete their degrees wholly by summer work must be in residence for 30 weeks, and present 30 semester hours of registered credit.

ADMISSION TO CANDIDACY. In order to be considered a candidate for a Master's degree (A.M., M.Ed., M.A.T.) a student must (1) have received the approbation of the major department, or in the case of the M.A.T., of his committee, (2) have made passing grades in all his courses during his first semester (If he registers for fewer than 12 semester hours of graduate courses during his first semester, or if he is enrolled in the Summer Session, he must make passing grades in his initial 12 hours of graduate courses.), (3) have made a grade of "G" or "E" on at least 3 semester hours of this work.

If he does not fulfill these conditions on the initial semester hours, but does better work, signified by a substantial number of "G's" or "E's" in a subsequent term, he may be granted permission then to re-apply for candidacy.

TRANSFER OF GRADUATE CREDITS. Credit for graduate course work earned at another institution will be determined only after a student has spent one semester at Duke University. After completing his first semester, the student should file a request that his credits be reviewed and a decision made.

Under certain circumstances a maximum credit of 6 semester hours may be allowed for graduate courses completed elsewhere. The acceptance of credit up to this amount, however, will not reduce the minimum period of full-time registered residence at Duke University.

With the approval both of the student's major department and the

Dean of the Graduate School, a student who is granted such transfer credit may be permitted to register for as much as 12 semester hours of thesis research instead of the usual 6 semester hours. Or he may be permitted to fill out his schedule with as much as 6 semester hours of further undergraduate training or 6 semester hours of required language courses on the undergraduate level. In no case will credit be allowed for extension or correspondence courses.

TIME LIMITS FOR COMPLETION OF MASTER'S DEGREES.

The candidate for a Master's degree must complete all of his course requirements and the thesis within a period of six calendar years from the date of his initial registration. Credits earned over a longer period of time cannot be credited toward a degree.

THE THESIS. The thesis should essentially demonstrate the student's ability to collect, arrange, interpret, and report pertinent material on his special research problem. Although a publishable document is not required, the thesis must be written in a literate style, and should exhibit the student's competence in scholarly methods and procedures.

The Master of Arts Degree

UNDERGRADUATE PREREQUISITE. As a prerequisite to graduate study in his major subject, the student must have completed a *minimum* of 12 semester hours of approved college courses in that subject, and 12 additional semester hours in that subject or in related work. Since some departments require more than 12 semester hours, the student should read carefully the special requirements listed by his major department, which are included as headnotes to the course offerings in the *Bulletin*.

LANGUAGE REQUIREMENTS. The candidate for the A.M. degree must have a reading knowledge of at least one foreign language. (The several departments reserve the right to specify which foreign languages are acceptable.) Evidence of such knowledge may be furnished in either of two ways: (1) by successfully passing an examination, officially conducted by the appropriate foreign language department at Duke University, or (2) by a transcript showing the completion of the third college year of one language, or the second college year of each of two acceptable foreign languages.

MAJOR AND MINOR SUBJECT. In his graduate work, the student, in order to complete the course requirements for the A.M. degree, must present acceptable marks for a minimum of 24 semester hours of graduate courses. Of these, at least 12 semester hours must be in the major subject.

Outside of his major, the student must take a minimum of 6 semester hours in a minor subject, the department of the minor to be ap-

proved by his major department. The remaining 6 semester hours of the necessary 24 may be taken in either of these departments, or in another approved by the major department and by the Dean of the Graduate School. In addition to these he must present a thesis, which carries a credit of 6 semester hours. Thus, his earned credit for the degree totals a minimum of 30 semester hours.

REGULATIONS AND PROCEDURES. On or before November 15 of the academic year in which it is expected the degree will be conferred, the student must file with the Dean of the Graduate School, on the official form, the title of the thesis. This title must have the approval of the Director of Graduate Studies in the major department, and of the professor under whose direction the thesis will be written.

The student who completes all of his work for the degree and who expects to receive it at the regular commencement exercises in June, must so notify the Graduate School office before the March 15 preceding.

Four bound, typewritten copies of the thesis must be submitted, in approved form, to the Dean of the Graduate School on or before May 1 preceding the June commencement at which the degree will be conferred. The copies will then be distributed to the several members of the examining committee. As specified by the Graduate Faculty, the thesis must be typed on the following grades of paper: the original must be green-lined paper of at least sixteen pound weight; the three copies must be on paper of at least thirteen pound weight. Both grades must be of seventy-five per cent rag content.

THE EXAMINING COMMITTEE AND THE EXAMINATION. After consultation with the professor who has directed the thesis, the Dean of the Graduate School appoints an examining committee composed of the director of the thesis and two other members of the Graduate Faculty, one of whom must be from a department other than that of the major.

The candidate appears before this committee for examination, which usually is restricted to the thesis and to the major field, and which lasts for about one and one-half hours.

If the candidate successfully stands his examination, the examining committee certifies to his passing by signing the title page of the thesis. The candidate then returns the original and one carbon copy of the thesis to the Dean of the Graduate School, who deposits them in the University Library.

The Master of Education Degree

PREREQUISITE. The degree of Master of Education is granted ordinarily only to teachers or to others engaged in educational work.

Before a student is admitted to graduate study for this degree, he

should have completed, on the undergraduate level, a minimum of 18 semester hours of approved work in education, including courses in Educational Psychology, and courses in the History of Education, Educational Sociology, or School Administration.

Early in the program of his work, the student must successfully pass two examinations: (1) a test of general ability, and (2) a test designed to determine his ability to write acceptable English. The student, before the degree is conferred, must also present evidence testifying to at least two years of teaching experience, gained either before his admission to course work, or concurrently with it.

REQUIREMENTS FOR THE DEGREE. The M.Ed. degree may be earned either with or without the presentation of a thesis:

WITHOUT THESIS: Students who elect this plan must present a total of 30 semester hours of credit. Twelve hours of this required work must include the four basic courses: Education 204, 210, 217, and 235. If a student, by examination, can demonstrate his competency in the subject matter of two of these courses, he may be granted exemption from the required work in these courses. In no case may he claim exemption from more than two.

Other requirements are: a departmental major (i.e., in Nursing Education, Elementary Education, Public School Administration, Public School Supervision, or Secondary Education) of at least 12 semester hours, and a minor of at least 6 semester hours in a department other than Education. Toward the end of his residence the student must pass a comprehensive examination on his departmental major and on the content of the four basic courses. Permission to take such examinations must be obtained from the Director of Graduate Studies of the Department of Education, and a notice of intention must be filed with him at least three weeks before the announced dates of the examination.

WITH THESIS: Students who elect this plan are permitted to substitute a thesis for 6 semester hours of the required course work. He must also present a thesis subject approved by the Professor of Education who intends to direct it, and by two other members of the staff in Education, including the Director of Graduate Studies. Two of the three members of the approving committee must be permanent members of the Duke University Graduate Faculty. The title of the thesis must be filed with the Dean of the Graduate School at the same time as the titles for the A.M. theses.

In addition to the thesis, the student must present at least 24 semester hours of course credit. Of these, 6 semester hours must be earned in *two* of the basic courses in the Department: Education 204, 210, 217, or 235. Of the remaining 18 or more semester hours, 6 semester hours must constitute a minor taken outside of the De-

partment of Education; at least 12 semester hours must be taken in the student's departmental major.

The examination on the thesis is similar to that for the Master of Arts degree.

The Master of Arts in Teaching Degree

PREREQUISITES. The degree of Master of Arts in Teaching is designed for both recent graduates of Liberal Arts colleges who wish to enter public school teaching and teachers already in service.

A student should normally have completed a minimum of 12 semester hours in his proposed major subject and an additional 12 semester hours in that or related subjects. In the event that a student wishes to undertake a graduate major different from the undergraduate major, the prerequisites may be modified upon the recommendation of the student's committee and the approval of the Dean of the Graduate School.

PROGRAMS FOR THE DEGREE. One of two programs may be arranged, in consultation with the student's committee:

A. A major in Education of 18 to 24 semester hours and 6 to 12 hours in non-education courses.

B. A major in non-education courses of 18 to 24 semester hours and 6 to 12 semester hours in Education.

In both programs a minimum of 30 semester hours is required.

The non-education courses are to be taken in one or more subjects ordinarily taught in the secondary schools. The amount and distribution of this work will be determined by the needs of the individual student.

The Master of Arts in Teaching may be earned with or without the presentation of a thesis. If a student, in consultation with his committee, elects to present a thesis, 6 semester hours of the total of 30 semester hours required will be allotted to thesis research. He will then be required to complete 24 semester hours of course credits. The regulations concerning the writing and submission of the thesis, and the examination of it, are the same as those governing the thesis for the Master of Arts degree.

THE COMMITTEE. Each candidate for the degree will be assigned a committee, appointed by the Dean of the Graduate School, to plan his program of study. This committee will consist of three members, at least one of whom will be from the Department of Education, and at least one from another department. The chairman of the committee will normally be chosen from the department of the major.

The Doctor of Philosophy Degree

The Ph.D. degree is essentially a research degree. Although course work is a necessary part of the student's program, the mere accumulation of course credits will not be sufficient for attaining this degree. The granting of the Ph.D. is based primarily upon the student's knowledge of a specialized field of study and upon the production of an acceptable dissertation embodying the results of original research.

Before undertaking a program of advanced work toward the Ph.D., the student should consult with the Dean of the Graduate School or the Director of Graduate Studies in his major department to determine the possibility of securing necessary instruction and supervision of research in his field of specialization.

REQUIREMENTS FOR THE PH.D. DEGREE. The formal requirements, discussed in detail below, for the Ph.D. degree are as follows: (1) foreign languages; (2) major and minor courses; (3) supervisory committee for program of study; (4) residence; (5) preliminary examination; (6) the dissertation; (7) the final examination.

FOREIGN LANGUAGES. Normally, a reading knowledge of both French and German is required. Such knowledge is evidenced by the passing of an examination conducted by the appropriate language department at Duke University, in cooperation with the student's major department.

With the permission of the major department, and with the approval of the Dean of the Graduate School, a student may be allowed to substitute for either of these another language which has a definite relation to the candidate's program of work for the Ph.D. degree. By rule of the Graduate School Faculty, language examinations must be passed before a student takes his preliminary examination. Some departments require the student to master these languages early in the graduate program.

MAJOR AND MINOR. The student's program of study necessarily demands substantial concentration on courses in his major department. Enough work must be taken in one department other than the major department to constitute an acceptable minor. Exceptions which permit both the major and minor within the same department are allowed only by the special permission of the Dean of the Graduate School.

COMMITTEE TO SUPERVISE THE PROGRAM OF STUDY. Ordinarily, during the student's third semester of graduate work a supervisory committee of five members is appointed by the Dean of the Graduate School. This committee, with the professor who is to direct the student's research serving as chairman, formulates the pro-

gram of study, which is submitted to the Dean of the Graduate School for his approval. Of the five members, one must be from a department (usually the minor) other than the major department. This committee, with occasional necessary changes, serves also as the examining committee for both the preliminary and the final Ph.D. examinations.

RESIDENCE. The normal period of residence is not less than three full academic years beyond the B.A. or B.S. degree. A student who already has his A.M. degree may be allowed one year of residence for it, and thus will need to spend a minimum of two additional years in residence. In unusual cases, a student who has spent the first two years in residence at Duke University may be allowed to take his third year of residence at some other accredited institution. This can be done only with the approval of the major department and of the Dean of the Graduate School. It should be understood that either the first two years or the last year must be spent in actual residence at Duke. Occasionally, because of undergraduate deficiencies, a student may need to spend additional time beyond the minimum residence in preliminary courses (for which he will not receive residence credit) as a background for certain aspects of his graduate program.

Except in unusual cases, graduate work of fragmentary character taken over a long period of years, or work completed many years before the student becomes a candidate for the degree at Duke University, will not be accepted as satisfying the requirements of residence.

CREDIT FOR SUMMER WORK. With the approval of the major department and of the Dean of the Graduate School, credit for a maximum of one year's residence may be granted for work completed in Summer Sessions. A full schedule of summer courses, carried for six weeks, constitutes one-fifth of a year's residence credit.

PRELIMINARY EXAMINATION. Near the end of the second academic year of graduate work (or in special cases early in the third year) the student must take his preliminary examination, which ordinarily covers the field of both his major and minor. Conducted by his Supervisory Committee, the examination is oral, or written, or both, as determined by the Committee. *Upon passing this examination, and not until then, the student is accepted as a candidate for the Ph.D. degree.* Transfer students who may already have passed a preliminary examination at another university must nevertheless take the examination at Duke.

PRIVILEGE OF RE-EXAMINATION. Should the student fail the preliminary examination, he may apply, with the consent of his Supervisory Committee and of the Dean of the Graduate School, for the privilege of a second examination to be taken no sooner than six

months after the date of the first. Failure on the second examination will render the student ineligible to continue his program for the Ph.D. degree at Duke University.

THE DISSERTATION. The dissertation is expected to be a mature and competent piece of writing, embodying the results of significant and original research. It must be, in essence, a contribution to knowledge.

The subject for the dissertation must receive the written approval of both the Director of Graduate Studies of the student's major department and of the professor who directs the dissertation. The title of the dissertation must be filed with the Dean of the Graduate School on or before October 15 preceding the June commencement at which the degree is expected to be conferred.

The dissertation must be completed to the satisfaction of the professor who directs it; and four bound, typewritten copies in approved form must be deposited with the Dean of the Graduate School on or before April 15 if the degree is to be granted at the June commencement following.

As specified by the Graduate Faculty, the dissertation must be typed on the following grades of paper: the original must be green-lined paper of at least sixteen pound weight; the three copies must be on paper of at least thirteen pound weight. Both grades must be of seventy-five per cent rag content.

The form of the title page must be approved by the major department and by the Dean of the Graduate School.

A biographical sketch of the author of the dissertation must be bound in at the end of each copy. Ten copies of a brief summary must be submitted with the dissertation.

After the final examination the original and the first carbon copy of the finally approved dissertation are returned to the Dean of the Graduate School, who deposits them in the University Library.

DISSERTATION FEE AND PUBLICATION REQUIREMENT. Not later than May 1 preceding the June commencement when the degree is to be conferred, the candidate must deposit with the Treasurer of the University, a dissertation fee of \$50.00. Should the dissertation be published in a form satisfactory to the professor under whom it was written, and to the Dean of the Graduate School, within a period of three years from the date of the degree, the deposit fee will be returned to the student.

Three copies of each published dissertation must be deposited with the Dean of the Graduate School, as provided by the regulation of the Graduate School Faculty. A suitable abstract or one or more articles in published form may be accepted as satisfying the publication requirements. Three copies of each of these must be deposited with the Dean of the Graduate School.

If the dissertation is not published within a three-year period under the conditions stated above, the deposit fee is forfeited and is credited to a Special Dissertation Fund, which is used for subsidizing the publication of such dissertations as are recommended by the Graduate School Faculty.

FINAL EXAMINATION. The final oral examination shall be primarily on the dissertation. Questions may, however, be asked in the candidate's major field. Normally, one year must elapse between the dates of the preliminary and the final examinations.

If a student fails his final examination, he may be allowed to take it for a second time, but not sooner than six months from the date of his first. Permission to take the second examination must be obtained from the professor who directed the dissertation and from the Dean of the Graduate School. Failure to pass the second examination renders the student ineligible to continue work for the Ph.D. degree at Duke University.

The Doctor of Education Degree

The Doctor of Education is a professional degree and is granted only to those who are, or intend to become, public school administrators.

ADMISSION. The candidate for the Ed.D. degree must meet the same requirements for admission to the Graduate School as the candidate for the Ph.D. degree. In addition to these uniform requirements, the candidate for the Ed.D. (1) must have had at least three years of experience in public school work, preferably in school administration; (2) must make a satisfactory mark on a psychological examination, and demonstrate, by examination, his ability to write good English; (3) must present strong letters of appraisal and recommendation from persons well qualified to speak with authority of his abilities; and (4) must present himself, if possible, for a personal interview. The Standing Committee on the Ed.D. degree reserves the right to insist upon an interview.

RESIDENCE. A minimum period of residence equivalent to three academic years beyond the B.A. or B.S. degree is required for the Ed.D. degree. Either the first two years or the last year must be taken at Duke, and the candidate must spend at least two consecutive semesters at Duke. Occasionally, because of undergraduate deficiencies, a student may need to spend additional time beyond the minimum residence in preliminary courses (for which he will not receive residence credit) as a background for certain aspects of his graduate program.

Except in unusual cases, graduate work of fragmentary character taken over a long period of years, or work completed many years before

the student becomes a candidate for the degree at Duke University, will not be accepted as satisfying the requirements of residence.

ACCEPTABLE MARKS ON FIRST YEAR'S WORK. In order to be considered for candidacy for the Ed.D. degree, the student must have passed all of his course work in the first year of graduate study; on at least 9 semester hours he must have made a grade of "G" or better.

PRELIMINARY EXAMINATION. By the end of his second year of residence the candidate for the Ed.D. degree will take a preliminary examination similar in scope to that described for the Ph.D. degree. Only after he passes this examination, will he be considered a candidate for the degree.

DISSERTATION FEE AND PUBLICATION REQUIREMENT. The dissertation fee and the publication requirement are the same as those for the Ph.D.

DISSERTATION AND FINAL EXAMINATION. The candidate must write a dissertation which demonstrates his ability to investigate and report on some significant phase of public school administration. The details of dissertation presentation, including its defense in a final examination, are the same as those for the Ph.D. degree.

AWARDING OF THE DEGREE. After the completion of the formal academic requirements for the Ed.D. degree, the candidate must devote at least one year of apprenticeship in a public school system, under conditions which assure appropriate supervision of the candidate's activities. The Standing Committee on the Ed.D. degree will decide the adequacy of this training. The degree will not be formally awarded until after the successful completion of this apprenticeship.

PROGRAM OF WORK. The details of the program of work are determined for each candidate by the Standing Committee for the Ed.D. degree. In general, the first year of work follows the program laid down for the M.Ed. degree. In the second and third years, work in Public School Administration is organized on the basis of seminars, rather than separate courses. This professional, specialized study accounts for about one-third of the course work. The other two-thirds is divided almost equally between the general field of Education and related work.

MAJOR AND MINOR. The major field is Public School Administration. The minor, or related work, amounting to at least 24 semester hours, must be taken in economics, political science, and sociology. Courses necessary for the student's program which lie outside these fields must receive the approval of the Standing Committee.

General Regulations

GRADUATE CREDIT FOR COURSES TAKEN IN THE SCHOOL OF LAW. Upon the recommendation of the Director of Graduate Studies, and upon the approval of the Dean of the Graduate School, students in the Social Sciences may take certain courses in the School of Law for graduate credit. In exceptional instances courses in the School of Law may be considered as fulfilling a student's requirements for a minor.

SIZE OF CLASSES. Classes which carry graduate credit are limited in size to twenty-five students. In exceptional cases this regulation may be modified, but only by permission of the Executive Committee of the Graduate School Faculty on the recommendation of the department concerned.

GRADING OF GRADUATE STUDENTS. Grades in the Graduate School are as follows: "E," "G," "S," "F," and "Inc." "E" (exceptional) is the highest mark. "G" (good) and "S" (satisfactory) are the remaining passing marks. "F" (failing) is below passing, and "Inc." (incomplete) indicates that some portion of the student's work is missing, for a satisfactory reason, at the time the grades are made out. The professor who gives an "Inc." specifies the date by which time the student must have made up the deficiency. In no case may an extension be granted beyond one calendar year from the date the course ended. No residence credit can be granted for that portion of a student's program which lapses because of incomplete marks.

CHARGE FOR REQUESTED TRANSCRIPTS. A student who wishes to transfer his credits from Duke University to another institution is entitled to one free transcript of his record. A fee of one dollar, payable in advance, is charged for each additional copy.

TRANSFER OF GRADUATE CREDITS. Credit for graduate course work earned at another institution will be determined only after a student has spent one semester at Duke University. After completing his first semester, the student should file a request that his credits be reviewed and a decision made.

WITHDRAWAL FROM GRADUATE SCHOOL. If a student wishes to withdraw from the Graduate School, he should notify both the Director of Graduate Studies in his major department and the Dean of the Graduate School.

GRADUATE CREDIT EARNED BEFORE A.B. DEGREE IS GRANTED. Ordinarily no credit for graduate courses earned before a student has been awarded his A.B. or B.S. degree will be allowed. However an undergraduate student at Duke University, who, at the beginning of a semester, lacks no more than 9 semester hours for fulfilling the requirements for the A.B. or B.S. degree, may obtain per-

mission from the Dean of the Graduate School to enroll for graduate courses sufficient to bring his total program to fifteen hours a week. Such graduate courses will be credited toward the A.M., M.Ed., or M.A.T., provided that the student meets the requirements for admission to the Graduate School, and that he is duly registered in the Graduate School at the beginning of that term.

Awards and Fees



Fellowships, Scholarships, and Assistantships

FOR the encouragement and financial assistance of graduate students of high character and marked ability, Duke University has established a considerable number of fellowships, scholarships, and assistantships. The stipends for these range from \$470 to \$2,000. Holders of grants pay tuition and other fees regularly required of all graduate students.

Fellows and scholars pay full tuition and fees and are registered for a full schedule of course work and receive full residence credit. Assistants, in general, pay four-fifths tuition and fees, are registered for a four-fifths schedule, and receive four-fifths residence credit.

APPLICATION FOR GRANTS. Applications for these grants, along with all supporting documents, must be submitted on or before March 1. Notification of awards is made about April 1. Late applications will be considered, should any vacancies occur in the list of appointees. No appointment is made for longer than one academic year.

Further information and application forms may be obtained from the Dean of the Graduate School, Duke University.

Grants offered for 1954-55 are:

FELLOWSHIPS. One Angier Duke Memorial Fellowship of \$2,000; twenty-four University Fellowships with stipends ranging from \$1,000 to \$1,800; three Gurney Harriss Kearns Fellowships in Religion of \$1,200 each.

GRADUATE ASSISTANTSHIPS. Approximately one hundred and ten appointments as departmental assistants or readers will be available for graduate students. The compensation will usually range from \$800 to \$1,800 depending upon the nature and amount of the work assigned.

GRADUATE SCHOLARSHIPS. Thirty scholarships with stipends varying from \$470 to \$1,500 each.

CHARLES W. HARGITT RESEARCH FELLOWSHIP IN ZOOLOGY. The Charles W. Hargitt Fellowship in Zoology is limited to research in the field of cellular studies. It is primarily for post-doctoral applicants and established investigators on sabbatical leave who desire to engage in full-time research. The stipend will

vary, depending upon previous training and experience, but in general will provide an income equivalent to that of a first year instructor and may be higher in the case of established investigators.

The recipient will have no departmental duties, but space and facilities will be provided.

The fellowship may occasionally be granted to a pre-doctoral applicant in his final year of graduate work who has met all degree requirements other than completion of research, and whose research gives promise of unusual merit.

Appointment is for one year with the possibility of reappointment. Inquiries and applications should be made to Dr. Henry S. Roberts, Department of Zoology, Duke University, Durham, North Carolina.

FELLOWSHIPS AND GRADUATE SCHOLARSHIPS IN FORESTRY. Information regarding special fellowships and graduate scholarships in forestry may be obtained from the Dean of the School of Forestry, Duke University, Durham, North Carolina.

SIGMA XI PRIZE AWARDS. The Society of Sigma Xi offers each year a prize for a Master's thesis and a prize for a Ph.D. dissertation in the fields of botany, chemistry, forestry, mathematics, medicine, physics, psychology, and zoology. The student must be in residence during the academic year in which the prize is awarded. Students holding graduate appointments are eligible to compete, but instructors, part-time instructors, and interns are not eligible. The department concerned makes the nomination. Full particulars may be obtained from the secretary of the chapter. Nominations, recommendations, copies of theses, reports, or other materials must be in the hands of the secretary on or before May 1. All papers should be submitted in duplicate.

Tuition, Fees, and Expenses

GENERAL FEES IN THE ACADEMIC YEAR. The following table shows the general fees and charges collected from all students. All fees for each semester are due and payable, unless otherwise specified, at the time of registration at the beginning of that semester. No student is admitted to classes until arrangements have been made with the Treasurer of the University for the settlement of fees.

Tuition, per semester.....	\$175.00
General Fee,* per semester.....	60.00
Athletic Fee, not including Federal Tax, Optional, per year, payable in the fall semester	10.00
Room-rent—See <i>Bulletin</i> of the Graduate School of Arts and Sciences.	
Special Dissertation Fee, payable by candidates for the Ph.D. degree, on or before the May 1 preceding the granting of the degree.....	50.00

* General Fees, in lieu of most special charges, include the following fees: Matriculation, Medical, Library, Damage, Commencement, Diploma, and an average of the Laboratory and Materials Fees.

Facilities for Graduate Study



The Libraries and Research Facilities

Graduate students have access to the General Library and the various school and departmental libraries. Such collections total 1,025,000 volumes, including many large and significant special collections. Science laboratories are large and well equipped for general and special research in botany, zoology, physics, chemistry, and medicine. The Duke Forest of eight thousand acres provides a large practical laboratory for forest research. Through the University's co-operative sponsorship of the Oak Ridge Institute of Nuclear Studies, graduate students are able to use the facilities of the National Laboratories at Oak Ridge. A detailed description of the libraries and research facilities is given in the *Bulletin of the Graduate School of Arts and Sciences*.

Graduate Study in the Summer Session

Graduate students who wish to work toward advanced degrees in the Summer Session, particularly in Chemistry, Economics, Education, English, History, Mathematics, Religion, Sociology, Spanish, and Zoology will find a wide selection of courses offered by members of the Duke faculty and by visiting professors. Other departments ordinarily offering sequences of work leading to the A.M. degree are Botany, Political Science, and Psychology. Thesis research for advanced graduate students is available also in other departments, such as Botany, Forestry, and Physics.

Students who wish to be admitted to the Graduate School for work in the Summer Session, should make application to the Dean of the Graduate School, as well as to the Director of the Summer Session, and should return the completed application, with supporting documents, before June 1, for admission to the first term, and before July 10, for admission to the second term.

Courses of Instruction



Most courses listed in this Bulletin are given on the West Campus. The letter (E) following the description means that the course is offered on the East Campus. In general, courses with odd numbers are offered in the first semester, those with even numbers in the second semester. The courses listed under the headnote to the several departments are those planned at the date of printing the Bulletin. Occasional changes may later be necessary.

AESTHETICS, ART, AND MUSIC

ASSOCIATE PROFESSOR MARKMAN

No graduate degree is offered in this department, but the following courses are suggested as possible minors for students majoring in history, literature, philosophy, religion, psychology, or sociology, or in any other interested departments.

In 1954-55 the courses planned are 215 and 216.

215. RELIGIOUS ART OF THE ANCIENT NEAR EAST.—The development of art, particularly architecture and sculpture, as the material expression of religious ideas in Egypt, Mesopotamia and in part Syria and Palestine to the Persian conquest. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

216. RELIGIOUS ART OF THE CLASSICAL WORLD.—The religious art, particularly architecture and sculpture, of Greece and Rome with special emphasis on the monuments in the Near East. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

217. AEGEAN ART.—A study of the problems of Aegean art as the forerunner of Greek art and in relation to the contemporary civilizations of the eastern Mediterranean world. Open to graduate students, seniors and, after consultation with the instructor, to juniors. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

218. EARLY GREEK ART.—A study of the problems of the origin and development of Greek art in the geometric period to the end of the archaic. Open to graduate students, seniors and, after consultation with the instructor, to juniors. 3 s.h.

ASSOCIATE PROFESSOR MARKMAN

DIVISION OF ANCIENT LANGUAGES AND LITERATURE

PROFESSORS CLARK, ROGERS, AND STINESPRING; ASSOCIATE PROFESSORS ROSE AND TRUESDALE;
ASSISTANT PROFESSORS BROWNLEE AND WAY

GREEK

No graduate degree is presently offered in Greek.

For 1954-55 the course planned is 257.

FOR SENIORS AND GRADUATES

201-202. GREEK TRAGEDY.—6 s.h.

ASSOCIATE PROFESSOR TRUESDALE

257. SOCIAL AND CULTURAL HISTORY OF THE HELLENISTIC WORLD FROM ALEXANDER TO AUGUSTUS.—Lectures, readings, and discussions. This course will not be separately credited without the sequel, Latin 258. 3 s.h.

PROFESSOR ROGERS

Graduate students of Duke University may attend the American School of Classical Studies in Athens, Greece, without charge for tuition, and they are eligible to compete for the fellowships that are offered annually by the School. These consist

of two fellowships in Greek archaeology, and one in the language, literature, and history of ancient Greece, each with a stipend of \$2,000. They are awarded mainly on the basis of examinations held in the beginning of February of each year.

LATIN AND ROMAN STUDIES

No graduate degree is presently offered in Latin.

The course planned for 1954-55 is 258.

FOR SENIORS AND GRADUATES

211-212. ROMAN ORATORY.—A survey of the history of Roman oratory, centering about the *Brutus* of Cicero and Tacitus' *Dialogus*. 6 s.h. PROFESSOR ROGERS

258. SOCIAL AND CULTURAL HISTORY OF THE GRAECO-ROMAN WORLD.—The Roman Empire as the trustee of Hellenism and Christianity, and its own original contributions to modern civilization; lectures, readings, and discussions. This course continues Greek 257 and will not be separately credited. 3 s.h. PROFESSOR ROGERS

SEMITICS

The courses planned for 1954-55 are 201-202, 207-208, 305, 307, 309.

FOR SENIORS AND GRADUATES

201-202. FIRST HEBREW.—The principles and structure of the Hebrew language, with translations of selected Old Testament narratives. 6 s.h. PROFESSOR STINESPRING

205-206. ELEMENTARY ARABIC.—Introduction to the classical language and literature, with some attention to the modern colloquial idiom. 6 s.h. PROFESSOR STINESPRING

207-208. SECOND HEBREW.—Samuel or Kings the first semester; Isaiah the second. 6 s.h. ASSISTANT PROFESSOR BROWNLEE

FOR GRADUATES

304. ARAMAIC.—A study of the Aramaic portions of the Old Testament and selected passages from the Targums, Midrashes, and Talmuds. 3 s.h. PROFESSOR STINESPRING

305. THIRD HEBREW.—A study of late Hebrew prose, with readings from Chronicles, Ecclesiastes, and the Mishnah. Hours to be arranged. 3 s.h. PROFESSOR STINESPRING

307. SYRIAC.—A study of the script and grammar, with readings from the Syriac New Testament and other early Christian documents. Some knowledge of Hebrew and Aramaic is prerequisite. 3 s.h. PROFESSOR STINESPRING

309. HISTORY OF THE ANCIENT NEAR EAST.—A survey of the early civilizations of Egypt, Palestine, Syria, and Mesopotamia in the light of Biblical archaeology. 3 s.h. PROFESSOR STINESPRING

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 217, Religion 217, 218, 220, 313, 316, 318.

Under the terms of a co-operative agreement graduate students of Duke University may, with the approval of the chairman of their major department, take any graduate course offered by the Departments of Greek and Latin of the University of North Carolina by the payment of a nominal fee. A list of these courses will be sent upon request.

BOTANY

PROFESSOR BLOMQUIST, CHAIRMAN—203 BIOLOGY BUILDING; PROFESSOR KRAMER, DIRECTOR OF GRADUATE STUDIES—04 BIOLOGY BUILDING; PROFESSORS HARRAR, OOSTING, AND WOLF; ASSOCIATE PROFESSORS ANDERSON, BILLINGS, NAYLOR, AND PERRY; ASSISTANT PROFESSOR PHILPOTT

Graduate work in the Department of Botany is offered leading to the A.M. and Ph.D. degrees. Before undertaking graduate study in botany a student should have

had in his undergraduate program at least 12 semester hours of botany beyond an elementary course, and related work in biological sciences. Some work in chemistry and physics will be desirable; and for some phases of botanical study, a necessity. The student's graduate program is planned to provide a broad basic training in the various fields of botany, plus intensive specialization in the field of the research problem.

The courses planned for 1954-55 are 202, 216, 221, 222, 224, 225-226, 253, 255, 256, 258, 259, 359-360, 397-398.

FOR SENIORS AND GRADUATES

202. GENETICS.—The principles of heredity, their cytological basis, and their bearing on other fields of biology. Laboratory work involves experimental breeding of the fruit fly and interpretation of data from the breeding of plants. Offered in alternate years. Prerequisites: one year of botany, zoology, or equivalent, and college algebra. 4 s.h. ASSOCIATE PROFESSOR PERRY

203. PLANT CYTOLOGY.—A study of the structure and organization of plant cells in relation to growth, reproduction, and especially heredity. Offered in alternate years. Prerequisite: one year of botany. 4 s.h. ASSOCIATE PROFESSOR ANDERSON

204. ADVANCED PLANT ANATOMY.—The structure of vegetative and reproductive organs of seed plants. Physiological and ecological implications of structure are stressed. Offered in alternate years. Prerequisite: Botany 55 or equivalent. 4 s.h.

216. BOTANICAL MICROTECHNIQUE.—Studies in methods of preparing temporary and permanent microscopical slides; theory of staining; the use of the microscope, especially microscopical measurements, drawing, and photomicrography; botanical photography, and lantern slides. Prerequisite: two semesters of botany. 4 s.h. ASSOCIATE PROFESSOR ANDERSON

221. STRUCTURE AND CLASSIFICATION OF FUNGI.—Prerequisite: two semesters of botany. 4 s.h. PROFESSOR WOLF

222. PHYSIOLOGY AND ECOLOGY OF FUNGI.—Prerequisite: Botany 221 or equivalent. 4 s.h. PROFESSOR WOLF

225-226. SPECIAL PROBLEMS.—Students with adequate training may do special work in the following fields. Credits to be arranged.

(a) BACTERIOLOGY, MYCOLOGY, AND PLANT PATHOLOGY.

PROFESSOR WOLF

(b) CYTOLOGY.

ASSOCIATE PROFESSOR ANDERSON

(c) ECOLOGY.

PROFESSOR OOSTING AND ASSOCIATE PROFESSOR BILLINGS

(d) GENETICS.

ASSOCIATE PROFESSOR PERRY

(e) MORPHOLOGY AND ANATOMY OF HIGHER PLANTS.

PROFESSORS HARRAR AND OOSTING; ASSISTANT PROFESSOR PHILPOTT

(f) MORPHOLOGY AND TAXONOMY OF LOWER GROUPS.

PROFESSOR BLOMQUIST AND ASSOCIATE PROFESSOR ANDERSON

(g) PHYSIOLOGY.

PROFESSOR KRAMER AND ASSOCIATE PROFESSOR NAYLOR

(i) TAXONOMY OF HIGHER GROUPS.

PROFESSOR BLOMQUIST

252. ADVANCED PLANT PHYSIOLOGY.—The physicochemical processes and conditions underlying the physiological processes of plants. Prerequisite: Botany 151 or equivalent; organic chemistry recommended. 3 s.h.

ASSOCIATE PROFESSOR NAYLOR

254. PLANT WATER RELATIONS.—A study of factors affecting the availability of water, its absorption and use in plants, and the effects of water deficits on plant processes. Assigned readings, reports, and lectures. Prerequisite: Botany 151 or equivalent. 3 s.h. PROFESSOR KRAMER

255. ADVANCED TAXONOMY.—A study of the historical background of plant taxonomy, modern concepts and systems of classifications, nomenclatorial problems, and the taxonomy of specialized groups. Prerequisite: two years of botany, including Botany 52 or equivalent. 4 s.h. PROFESSOR BLOMQUIST

256. COMMUNITY ANALYSIS AND CLASSIFICATION.—The development of concepts and methods in synecology and their present application to the study of plant communities. Prerequisite: Botany I56 or equivalent. 3 s.h.

PROFESSOR OOSTING

257. PRINCIPLES OF PLANT DISTRIBUTION.—Interpretation of the floristic and ecological plant geography of the world's vegetation. Prerequisite: Botany I56 or equivalent. 3 s.h.

ASSOCIATE PROFESSOR BILLINGS

258. PHYSIOLOGY OF GROWTH AND DEVELOPMENT.—Consideration of the internal factors and processes of new protoplasm and its differentiation at the cellular, tissue, and organ level in plants. Prerequisites: Botany I51 or equivalent; organic chemistry recommended. 3 s.h.

ASSOCIATE PROFESSOR NAYLOR

259. ENVIRONMENTAL MEASUREMENTS.—Methods of obtaining and evaluating climatological data for ecological purposes with special attention to instrumentation and microclimate. Prerequisite: Botany I56 or equivalent. 3 s.h.

ASSOCIATE PROFESSOR BILLINGS

305. VEGETATION OF NORTH AMERICA.—Distribution and limits of the major plant communities, a study in ecological plant geography. Prerequisite: Botany I56 or equivalent. 3 s.h.

PROFESSOR OOSTING

310. STRUCTURE AND CLASSIFICATION OF BRYOPHYTES AND PTERIDOPHYTES.—The morphological and systematic characteristics of mosses, liverworts, ferns, and fern allies. 4 s.h.

PROFESSOR BLOMQUIST

311. STRUCTURE AND CLASSIFICATION OF ALGAE.—The morphological and ecological characteristics of the common freshwater and marine species and the principles underlying their classification. Collecting, identification, and the making of permanent microscopical preparations. 4 s.h.

PROFESSOR BLOMQUIST

341. METHODS IN PLANT PHYSIOLOGY.—The theory and use of apparatus and methods in the physiological research. 3 s.h.

PROFESSOR KRAMER AND ASSOCIATE PROFESSOR NAYLOR

359-360. RESEARCH IN BOTANY.—Individual investigation in the various fields of botany. Credits to be arranged.

PROFESSORS BLOMQUIST, HARRAR, KRAMER, OOSTING, WOLF;
ASSOCIATE PROFESSORS ANDERSON, BILLINGS, NAYLOR, AND PERRY;
ASSISTANT PROFESSOR PHILPOTT

397-398. GENERAL BOTANICAL SEMINAR.—One hour per week throughout the year. Required of all graduates majoring in botany. 2 s.h.

PROFESSORS BLOMQUIST, HARRAR, KRAMER, OOSTING, WOLF; ASSOCIATE
PROFESSORS ANDERSON, BILLINGS, NAYLOR, AND PERRY; AND
ASSISTANT PROFESSOR PHILPOTT

FOREST BOTANY

FOR SENIORS AND GRADUATES

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1 and 2. 4 s.h.

PROFESSOR WOLF

253. DENDROLOGY.—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of botany. 3 s.h.

PROFESSOR HARRAR

RELATED COURSES IN OTHER DEPARTMENTS

This related course may be counted toward a major in botany: Forestry 257.

CHEMISTRY

PROFESSOR HOBBS, CHAIRMAN—022 CHEMISTRY BUILDING; PROFESSOR VOSBURGH, DIRECTOR OF GRADUATE STUDIES—211 CHEMISTRY BUILDING; PROFESSORS BIGELOW, GROSS, HAUSER, HILL, LONDON, AND SAYLOR; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

In the Department of Chemistry graduate work is offered leading to the A.M. and Ph.D. degrees. Before undertaking a graduate program in chemistry, a student should have taken an undergraduate major in chemistry along with related work in mathematics and physics.

Graduate courses in the department are designed to provide a broad basic training in the fields of inorganic, organic, analytical, and physical chemistry. An important requirement for the Ph.D. degree is the successful completion, under the direction of a member of the Staff, of a research program leading to the solution of an original problem. The choice of the research problem, for either the A.M. or the Ph.D. degrees, will determine the field of advanced specialization.

For 1954-55 the courses planned are 206, 215, 233, 234, 251, 252, 253-254, 261-262, 265-66, 271, 273-274, 275-276, 303, 350, 351-352, 360, and 363-364.

FOR SENIORS AND GRADUATES

206. ELEMENTS OF THEORETICAL CHEMISTRY.—A course in the general principles of physical chemistry for students who do not present credit in calculus. Credit is not given for both 206 and 261-262. Three recitations and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics. 6 s.h. With the permission of the Director of Graduate Studies, graduate students from other departments may offer other advanced science courses in place of some of these prerequisites. 4 s.h.

PROFESSORS SAYLOR AND HOBBS

215. ADVANCED INORGANIC CHEMISTRY.—A study of modern theories of valence and molecular structure; also of inorganic compounds, particularly the less common types, illustrated by suitable laboratory preparations. Prerequisites: Chemistry 70, 151-152, and 261-262, or 206. 1, 3, or 4 s.h.

PROFESSORS VOSBURGH AND HILL

216. NUCLEAR CHEMISTRY.—Types and elementary theory of nuclear reactions and the considerations involved in the use of tracers in chemical studies. 1 s.h.

PROFESSOR HILL

233. INSTRUMENTAL ANALYSIS.—Experiments in the use of physical measuring instruments in chemical analysis with special attention to optical instruments. One lecture and three laboratory hours per week. Prerequisites: Chemistry 70 and one year of physics. 2 s.h.

ASSISTANT PROFESSOR STROBEL; PROFESSORS HOBBS, SAYLOR, AND VOSBURGH

234. PHYSICO-CHEMICAL METHODS OF ANALYSIS.—Discussion of physico-chemical principles as applied to methods of instrumental analysis, illustrated by laboratory experiments, with emphasis on methods involving electrical techniques. One lecture and three laboratory hours per week. Prerequisites: Chemistry 70 and either 261-262 or 206; either of the latter may be taken concurrently. 2 s.h.

ASSISTANT PROFESSOR STROBEL; PROFESSORS HOBBS, SAYLOR, AND VOSBURGH

251. QUALITATIVE ORGANIC ANALYSIS.—Systematic identification of organic compounds, including a study of solubilities and classification reactions. One lecture and three or six laboratory hours per week. Prerequisites: Chemistry 70 and 151-152. 2 or 3 s.h.

PROFESSOR HAUSER

252. ADVANCED ORGANIC PREPARATIONS.—A laboratory course designed to supplement the student's knowledge of fundamental organic processes by a selected group of laboratory exercises accompanied by oral discussions of techniques and theories pertinent to the experiments. Five hours laboratory and lecture, with lectures in alternate weeks. Prerequisites: Chemistry 70 and 151-152. 2 s.h.

ASSOCIATE PROFESSOR BROWN AND PROFESSOR BIGELOW

261-262. **PHYSICAL CHEMISTRY.**—Fundamentals of general theoretical chemistry illustrated by selected laboratory experiments. Two recitations and three laboratory hours. Prerequisites: Chemistry 70, 151-152, Physics 51-52 or 1-2 and Mathematics 51-52 or equivalent. 6 s.h. PROFESSORS HOBBS AND SAYLOR

271. **INTRODUCTION TO RESEARCH.**—Lectures on the use of chemical literature, research methods, recording and publication of results, and other topics. One lecture per week. 1 s.h. ASSOCIATE PROFESSOR BROWN

275-276. **RESEARCH.**—The aim of this course is to give instruction in methods used in the investigation of original problems. Individual work and conferences. 2 to 6 s.h. PROFESSORS BIGELOW, GROSS, HAUSER, HILL, HOBBS, LONDON, SAYLOR, AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHER AND BROWN; ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

FOR GRADUATES

303. **THERMODYNAMICS.**—Fundamental laws of thermodynamics and their applications to chemistry and physics. 3 s.h. PROFESSORS SAYLOR AND VOSBURGH

304. **PHYSICAL CHEMISTRY OF REACTIONS.**—The theoretical aspects of reaction kinetics, chemical equilibrium, atomic and molecular forces, and the relation of these to chemical reactions are considered. Prerequisite: Chemistry 261-262. 3 s.h. PROFESSORS HILL AND HOBBS

336. **THEORY OF ANALYTICAL CHEMISTRY.**—A study of such topics as precision and errors, theories of precipitation and titration, oxidation and reduction, and others, illustrated by typical analytical methods. One lecture per week. Prerequisites: Chemistry 70 and 261-262. 1 s.h. PROFESSOR VOSBURGH

341-342. **ADVANCED ORGANIC CHEMISTRY.**—Discussion of the theories of organic chemistry with special reference in the first semester to the mechanism of reactions and in the second semester to the synthesis of some of the more complex compounds such as vitamins, hormones, and alkaloids. Undergraduates are admitted to this course only by permission of the Director of Undergraduate Studies. Prerequisites: Chemistry 70 and 151-152. 4 s.h. PROFESSORS BIGELOW AND HAUSER

350. **ORGANIC REACTIONS.**—A study of the scope and limitations of the more important types of reactions of organic chemistry from the point of view of their practical use in the synthesis of organic compounds. Lectures and discussion. Prerequisites: Chemistry 251 and 253. 2 s.h. ASSOCIATE PROFESSOR BRADSHER

351-352. **ADVANCED SYNTHETIC ORGANIC CHEMISTRY.**—Recent advances in certain selected fields, such as the mechanism of organic reactions, medicinals, dyes, perfumes, terpenes, and alkaloids, will be discussed. The emphasis will be placed on structure studies and synthetic methods. Lecture or seminar one hour each week. 2 s.h. PROFESSORS BIGELOW AND HAUSER

360. **POLYMER CHEMISTRY.**—A survey of the methods of preparation of high-molecular-weight organic compounds and a study of the properties characteristic of macro-molecules in solution and in the solid state. Prerequisite: Chemistry 303. 2 s.h. ASSISTANT PROFESSOR KRIGBAUM

363-364. **SPECIAL TOPICS IN PHYSICAL AND INORGANIC CHEMISTRY.**—Various topics in physical and inorganic chemistry which are of special interest to the staff or students are considered, such as absorption and scattering of light, dielectric phenomena, electrode processes, electrolyte theory, ion exchange, molecular structure, solubility, and valence theory. Prerequisites: Chemistry 261-262, 303 and 304. 4 s.h. PROFESSORS GROSS, HILL, HOBBS, LONDON, SAYLOR AND VOSBURGH, AND ASSISTANT PROFESSOR STROBEL

365-366. **CHEMICAL PHYSICS, STATISTICAL THEORY.**—General introduction to statistical mechanics and applications to chemical problems; solution theory, reaction velocity, changes of state, quantum statistics and the metallic state. Lectures, conferences, and assigned problems. 6 s.h. PROFESSOR LONDON

367-368. **CHEMICAL PHYSICS, QUANTUM THEORY OF ATOMIC AND MOLECULAR STRUCTURE.**—Theory of atomic and molecular forces and the structure of matter. Lectures, conferences, and assigned problems. 6 s.h.

PROFESSOR LONDON

373-374. **SEMINAR.**—Required of all graduate students in chemistry. One hour a week discussion. 2 s.h.

PROFESSORS BIGELOW, GROSS, HAUSER, HILL, HOBBS, SAYLOR, AND VOSBURGH; ASSOCIATE PROFESSORS BRADSHAW AND BROWN; ASSISTANT PROFESSORS KRIGBAUM AND STROBEL

RELATED COURSES IN OTHER DEPARTMENTS

Biochemistry and Nutrition M241, M242, M341, M343-344, M349-350, M351; and Microbiology M322.

ECONOMICS

PROFESSOR HOOVER, CHAIRMAN—320 LIBRARY; PROFESSOR SPENGLER, DIRECTOR OF GRADUATE STUDIES—322 LIBRARY; PROFESSORS BLACK, DE VYVER, HANNA, HUMPHREY, RATCHFORD, SIMMONS, SMITH, AND VON BECKERATH; ASSOCIATE PROFESSOR LONDON; ASSISTANT PROFESSORS CARTIER, DEWEY, AND MCKENZIE

Graduate work in the Department of Economics is offered leading to the A.M. and Ph.D. degrees. In order to enter upon graduate work in economics a student should have completed with satisfactory grades at least 12 semester hours of undergraduate work in economics, including 6 hours of Principles of Economics. Among the undergraduate courses of distinct advantage to the graduate student specializing in economics are: General Accounting, Elementary Statistics, and basic courses in philosophy, psychology, the social sciences other than economics, and mathematics.

The fields from among which students working toward a Ph.D. degree in economics may choose for purposes of concentration are: Economic Theory, History of Economic Thought, Trade Cycle and Income and Employment Theory, Demographic and Economic Growth and Change, Economic History, Economic Systems, Industrial and Organizational Economics, International Trade, Labor Economics, Mathematical and Econometrical Economics, Money and Banking, and Public Finance. The requirements for the Ph.D. degree in economics normally include (among other things) completion of the work (or its equivalent) making up the first three of these fields, together with two additional fields; a course or its equivalent in each of most of the remaining fields; adequate knowledge of statistics; and three or four courses in a minor field. When circumstances warrant, these requirements are subject to some modification.

For 1954-55 the following courses are planned for graduate students in economics and related fields: 200, 240, 241, 243, 304, 313, 314, 315, 316, 317, 320, 330, 331, 355, 365 and the Public Control of Business Seminar. For 1955-56 the following courses are planned: 200, 237-238, 241, 244, 305, 311, 312, 313, 314, 319, 320, 329, 358, 365, 396 and the Public Control of Business Seminar.

FOR SENIORS AND GRADUATES*

233. **STATE AND LOCAL FINANCE.**—A study of expenditures, taxation, and financial administration in state and local governments with emphasis on current problems. Special attention will be given to research methods and materials and to the financial relations between state and local governments. 3 s.h.

PROFESSOR RATCHFORD

237-238. **STATISTICAL METHODS.**—A study of statistical methods appropriate for dealing with problems in business and the social sciences. In addition to developing more thoroughly the subjects considered in *Business Statistics*, the following methods will be considered: multiple, partial, and curvilinear correlation; curve fitting; probability; sampling distributions; and statistical inference. Prerequisite: Economics 138 or consent of the instructor. Either semester may be taken for credit. 6 s.h.

PROFESSOR HANNA

* Graduate students in economics normally will not receive credit for courses 233, 256, and 262. These courses may be taken for credit by non-economics graduate students, with the consent of the instructor.

240. NATIONAL INCOME.—A critical survey of the conceptual framework and structure of national income and its components, the reliability of national income estimates, and their use in analyzing questions of economic policy. 3 s.h.

PROFESSOR HANNA

256. LABOR LEGISLATION AND SOCIAL INSURANCE.—A study of the relations of the state to labor problems with special reference to remedial legislation, to interference in labor disputes, and to social insurance. 3 s.h.

PROFESSOR DE VYVER

262. TRADE UNIONISM AND COLLECTIVE BARGAINING.—An intensive survey of the trade union as an economic institution is followed by a study of the principles and problems of union-management relationship as found in collective bargaining. 3 s.h.

PROFESSOR DE VYVER

275-276. ADVANCED INDUSTRIAL ACCOUNTING AND MANAGEMENT.—A comprehensive examination of the rationale and techniques of control methods used in industry. Emphasis is laid on a critical evaluation of the practices followed by job-order, process, and standard costing, as well as the economics of overhead costs. Prerequisites: Economics 171-172 and permission of the Department. 6 s.h.

PROFESSOR BLACK

FOR GRADUATES

200. INTRODUCTORY MATHEMATICAL ECONOMICS.—This course is designed to acquaint the student with the role and the use of mathematical and related methods in economic analysis. 3 s.h.

ASSISTANT PROFESSOR MCKENZIE

241. ECONOMIC ANALYSIS.—Review of contemporary theory relating to consumer behavior, production, the firm, price formation, income distribution, and equilibrium. 3 s.h.

PROFESSOR SPENGLER

243. MATHEMATICAL ECONOMICS.—A systematic survey of mathematical economic theory. The principal topics are conditions of static equilibrium, including stability conditions, dynamic models using difference equations, and linear production models of input-output analysis and activity analysis. 3 s.h.

ASSISTANT PROFESSOR MCKENZIE

244. INTRODUCTION TO ECONOMETRICS.—The theory of statistical model building in economics. The identifiability of parameters in a system of linear difference equations. The statistical estimation of parameters. The design of dynamic economic models. 3 s.h.

ASSISTANT PROFESSOR MCKENZIE

304, 305. SEMINAR IN MONEY AND BANKING.—3 s.h. each.

PROFESSOR SIMMONS

311-312. HISTORY OF POLITICAL ECONOMY.—A detailed review of the development of economic theory, the tools of economic analysis, and economics as a science, together with an analysis of the circumstances affecting this development. Period covered: pre-Christian times through 1936. 6 s.h.

PROFESSOR SPENGLER

313-314. SEMINAR IN ECONOMIC THEORY.—The course consists of directed research in economic theory. The primary purpose is the correction of authoritative eclecticism and its replacement by individually integrated theory. Prerequisite: Economics 241 or its equivalent. 6 s.h.

PROFESSOR HOOVER

315. SEMINAR IN ECONOMIC SYSTEMS.—3 s.h.

PROFESSOR HOOVER

316. SEMINAR IN ECONOMIC FUNCTIONS OF THE STATE.—3 s.h.

PROFESSOR HOOVER

317. SEMINAR IN DEMOGRAPHIC, POPULATION, AND RESOURCE PROBLEMS.—3 s.h.

PROFESSOR SPENGLER

318. GENERAL SEMINAR IN ECONOMICS.—All graduate students with economics as a major subject are members of this seminar. Reports of progress in research will be made, and there will be lectures and critical discussion by members of the Department. Year course. No credit.

ALL MEMBERS OF THE GRADUATE STAFF

319. SEMINAR IN THE THEORY AND THE PROBLEMS OF ECONOMIC GROWTH AND CHANGE.—3 s.h. PROFESSOR SPENGLER

320. SEMINAR IN TRADE CYCLE, EMPLOYMENT, AND INCOME THEORY.—3 s.h. ASSISTANT PROFESSOR CARTTER

329. FEDERAL FINANCE.—A study of the expenditures, revenues, and financial administration of the government of the United States, with emphasis on current problems. Special attention given to budgetary procedure, corporate and individual income taxes, and the financial relations between federal and state governments. Prerequisite: Economics 187 or consent of instructor. 3 s.h. PROFESSOR RATCHFORD

330. SEMINAR IN PUBLIC FINANCE.—3 s.h. PROFESSOR RATCHFORD

331. SEMINAR IN ECONOMIC HISTORY.—3 s.h. PROFESSOR SMITH

355. SEMINAR IN LABOR ECONOMICS.—3 s.h. PROFESSOR DE VYVER

358. SEMINAR IN LABOR MARKET AND RELATED ANALYSIS.—3 s.h. ASSISTANT PROFESSOR CARTTER

365. SEMINAR IN INTERNATIONAL TRADE.—3 s.h. PROFESSOR HUMPHREY

386. SEMINAR IN LATIN-AMERICAN ECONOMIC PROBLEMS.—3 s.h. PROFESSOR SMITH

389. SEMINAR IN INDUSTRIAL AND GOVERNMENTAL PROBLEMS.—3 s.h.

RELATED COURSES IN OTHER DEPARTMENTS

The following course carries either economics or political science credit for economics majors:

POLITICAL SCIENCE 341. SEMINAR IN PUBLIC ADMINISTRATION.—3 s.h. PROFESSOR CONNERY AND ASSISTANT PROFESSOR DEWEY

The following course, included in the curriculum of the School of Law, carries economics credit for economics majors:

PUBLIC CONTROL OF BUSINESS SEMINAR.—Intensive study of the Federal anti-trust laws and their common-law background, with emphasis on the economic policies involved. 3 s.h. PROFESSOR LIVENGOOD AND ASSISTANT PROFESSOR DEWEY

Courses comprising a candidate's minor may be selected from fields of forestry, history, mathematics, philosophy, political science, psychology, and sociology and anthropology, or from an area that complements the candidate's area of research interests in economics.

EDUCATION

PROFESSOR CARTWRIGHT, CHAIRMAN—1c2 WEST DUKE BUILDING; PROFESSOR BOLMEIER, DIRECTOR OF GRADUATE STUDIES—1c1 WEST DUKE BUILDING; PROFESSORS CARR, CHILDS, AND NAHNI; ASSOCIATE PROFESSORS EASLEY, RUDISILL, STUMPF, AND WEITZ; ASSISTANT PROFESSORS MCLENDON, PETTY, AND REYNOLDS

Graduate work in Education is offered leading to the A.M., the M.Ed., the M.A.T., the Ph.D., and the Ed.D. degrees. For each of these degrees there are specific requirements and prerequisites, all of which may be found stated in detail in this *Bulletin*, pp. 34-43.

Departmental requirements and prerequisites for all of these degrees may be obtained from the Director of Graduate Studies. The courses planned for 1954-55 are 201, 203, 204, 205, 206, 208A, 208B, 209, 210, 217, 224, 225, 226, 234, 235, 246, 253, 255, 258, 267, 276, 332-333.

ELEMENTARY EDUCATION

FOR SENIORS AND GRADUATES

201. TEACHING AND SUPERVISION OF ARITHMETIC.—This course gives special attention to the number system, the fundamental operations (with whole numbers, fractions, and decimals), percentage, and measurements. The course will

consider the meaning theory, method of teaching, problem solving, evaluation, practice and drill, and selection and gradation of arithmetical contents. The course is designed for teachers and supervisors in the elementary school. 3 s.h. (E)

ASSISTANT PROFESSOR PETTY

224. TEACHING THE SOCIAL STUDIES IN ELEMENTARY SCHOOLS.—This course will treat objectives, curriculum trends, methods, and materials in elementary-school social studies. Topics to receive emphasis include unit-planning, use of the textbook, the reading program, using community resources, audio-visual materials, dealing with controversial issues, teaching time and place concepts, and evaluation. Opportunity will be provided for teachers to work on their own school problems in the social studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

226. TEACHING READING IN THE ELEMENTARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

232. SUPERVISION OF INSTRUCTION.—A survey of supervision as a means of improving instruction and adapting the curriculum to the learner and to community needs. 3 s.h. (E)

PROFESSOR CARR

235. THE NATURE, FUNCTION, AND REORGANIZATION OF THE CURRICULUM.—One of the required courses for the Master of Education degree without thesis. Selected problems guiding the reading of students. Open to graduate students only. 3 s.h. (E)

PROFESSORS CARR AND CARTWRIGHT

267. THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL.—This course deals with such topics as aims and values, curriculum materials, classroom and laboratory procedures, field trips, lesson planning, and grade placement for science teaching in the elementary school. 3 s.h. (E)

ASSISTANT PROFESSOR REYNOLDS

EXPERIMENTAL EDUCATION AND EDUCATIONAL PSYCHOLOGY

FOR SENIORS AND GRADUATES

208A. MENTAL TESTS AND APPLICATION.—A study of the development of intelligence testing, the concept of general intelligence, various recent applications of mental tests, and training in the giving of individual tests. Prerequisite: course 258 or six semester hours of other work in educational psychology or psychology. First semester. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

208B. PRACTICUM.—Open only to students approved by the instructor. Second semester. 2 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

209. STATISTICAL METHODS APPLIED TO EDUCATION.—A study of statistical methods of treating educational and social data designed to enable teachers or administrators to interpret and use the results of scientific investigations in education. 3 s.h. (E)

ASSOCIATE PROFESSORS EASLEY AND STUMPF

210. INTRODUCTION TO EDUCATIONAL RESEARCH.—The general purpose of this course is to give the student an overview of research, acquaint him with the nature of research processes, and develop within him an appreciation of the essential characteristics of good research work. The course is one of the four basic courses required for the Master of Education degree without thesis and is designed to be liberalizing as well as technical. Open to graduate students only. 3 s.h. (E)

ASSOCIATE PROFESSOR STUMPF

216. PSYCHOLOGICAL PRINCIPLES OF SECONDARY EDUCATION.—A study of adolescence and the psychology of learning as applied to teaching the principal high-school subjects. 3 s.h. (E)

PROFESSOR CHILDS

217. THE PSYCHOLOGICAL PRINCIPLES OF EDUCATION.—An advanced study of teaching, learning, and the learner. This is one of the courses required for the Master of Education degree without thesis. Selected problems guiding the reading of students will be discussed in class. Open to graduate students only. 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

227. **THE PSYCHOLOGY OF LEARNING: PROBLEMS.**—The major problems related to the learning process will be examined, with the experimental literature bearing on them. The curves of learning and forgetting, the distribution of practice, economical methods of learning, and the transfer of training will be the major topics considered. 3 s.h. (E) ASSOCIATE PROFESSOR EASLEY

258. **EDUCATIONAL MEASUREMENTS.**—A critical study of the principles and techniques involved in measurement in education, with opportunity for individual research. Prerequisite: twelve semester hours in the Department, including a course in educational psychology. 3 s.h. (E) PROFESSOR BOLMEIER

HISTORY AND PHILOSOPHY OF EDUCATION

FOR SENIORS AND GRADUATES

204. **THE SCHOOL AS AN INSTITUTION.**—Consideration is given to the place of the school in the American social order, and its adaptation to social, economic, and political changes. Special attention is directed to the responsibility (1) of the school for seeking solutions to the perplexing problems of youth created by a changing society; and (2) of the government for providing greater equality of educational opportunities. One of the required courses for the M.Ed. degree without thesis. Open to graduate students only. 3 s.h. (E) PROFESSOR BOLMEIER

PUBLIC SCHOOL ADMINISTRATION

FOR SENIORS AND GRADUATES

203. **PRINCIPLES OF SCHOOL ADMINISTRATION.**—The fundamental facts and procedures of school administration, an analysis of the problems and policies of the organization and direction of a local school system, and the functions of the various school officials. Prerequisites: Education 103 and 88, or six semester hours of equivalent work in education. 3 s.h. (E) PROFESSOR BOLMEIER

213. **PROBLEMS IN THE ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL.**—A study of the work of the elementary-school principal. 3 s.h. (E)

234. **SECONDARY-SCHOOL ORGANIZATION AND ADMINISTRATION.**—This course is designed especially for principals, teachers, and other prospective members of the secondary-school staff. The scope of secondary education is considered to encompass junior high school, regular high school, senior high, and junior college. Special treatment is given to the problems of internal organization and management. 3 s.h. (E) PROFESSOR BOLMEIER

253. **SCHOOL LAW.**—The primary purpose of this course is to familiarize prospective school administrators and teachers with the legal features of school organization and administration. Although some attention is given to constitutional and statutory provisions, the main emphasis is upon court decisions relating to education. Students are expected to select appropriate problems in school law for intensive study. 3 s.h. (E) PROFESSOR BOLMEIER

290. **ADMINISTRATION OF SCHOOL PROPERTY.**—Planning and management of the school plant and its equipment to meet instructional, health, and community needs for immediate and long-range purposes. This course is intended especially for teachers and principals as well as for superintendents. Areas to be treated will include site selection; trends in design, lighting, ventilation, and heating; custodial service and maintenance; and financing. 3 s.h. (E) ASSOCIATE PROFESSOR STUMPF

FOR GRADUATES

323. **PUBLIC SCHOOL FINANCE.**—A study of educational costs, sources of revenue for the support of public education, collection of revenue, basis of distribution, and accounting for funds spent. 3 s.h. (E) ASSOCIATE PROFESSOR STUMPF

330-331. **PUBLIC SCHOOL ADMINISTRATION, SEMINAR I.**—This seminar is to be taken in the second year of the Ed.D. program. It involves consideration of the following four units of work: (1) organizing the school system; (2) adminis-

tering the educational program; (3) financing the educational program; (4) administering the school personnel. 6 s.h. each semester. (E)

PROFESSORS CARTWRIGHT AND BOLMEIER,
AND ASSOCIATE PROFESSOR STUMPF

332-333. PUBLIC SCHOOL ADMINISTRATION, SEMINAR II.—This seminar is to be taken in the third year of the Ed.D. program. It involves the business administration of the school system; school plant planning, maintenance and operation; public relations and legal aspects of school administration; school records and reports; policy making and the evolution of current procedures. Students will spend some time in field work observing school systems in operation and studying current problems of school administration. 6 s.h. each semester. (E)

PROFESSOR BOLMEIER AND ASSOCIATE PROFESSOR STUMPF

SECONDARY EDUCATION AND EDUCATIONAL SOCIOLOGY

FOR SENIORS AND GRADUATES

205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION.—A consideration of the aims and objectives of secondary-school subjects, emphasizing practical problems of curriculum-making in the high school. 3 s.h. (E)

PROFESSOR CARTWRIGHT

215. EDUCATIONAL AND VOCATIONAL GUIDANCE.—A survey of the literature on guidance with special reference to secondary education; a critical study of the principles and techniques used in guidance; an attempt to locate the problems most urgently in need of solution. 3 s.h. (E)

PROFESSOR CHILDS

225. THE TEACHING OF HISTORY AND THE SOCIAL STUDIES.—Evaluation of the objectives, content, materials, and methods in the teaching of history and the social studies. 3 s.h. (E)

PROFESSOR CARTWRIGHT

236. TEACHING READING IN THE SECONDARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. For secondary-school teachers of all subjects who wish to improve the reading and study habits of their students. 3 s.h. (E)

ASSOCIATE PROFESSOR RUDISILL

246. THE TEACHING OF MATHEMATICS.—This course deals with such topics as aims, curriculum, course and lesson planning, and classroom procedure for teaching secondary-school mathematics. 3 s.h. (E)

ASSOCIATE PROFESSOR REYNOLDS

255. GUIDANCE FUNCTIONS OF THE CLASSROOM TEACHER.—A consideration of the guidance philosophy, methods, and tools appropriate to the student personnel functions of the classroom teacher. This course is designed for students who do not plan to become guidance specialists, but who wish to apply the principles and techniques of guidance in their teaching and program of pupil development. Prerequisites: 12 s.h. of work, either in education or in a combination of education and psychology, or in psychology. 3 s.h. (E)

ASSOCIATE PROFESSOR WEITZ

276. THE TEACHING OF HIGH-SCHOOL SCIENCE.—Discussion, lectures and collateral reading, related to such topics as aims, tests, curriculum, classroom and laboratory procedure, field trips, course and lesson planning for secondary-school science. 3 s.h. (E)

ASSISTANT PROFESSOR REYNOLDS

NURSING EDUCATION

311. NURSING EDUCATION: PROBLEMS OF PERSONNEL ADMINISTRATION IN NURSING.—A course which deals with problems in the organization and administration of personnel services for students and for graduate nurses. It includes a discussion of methods of selection and orientation, personnel records, provision for general welfare, counseling, placement, and follow-up. Year course. 4 s.h.

PROFESSOR NAHM

312. NURSING EDUCATION: RESEARCH PROBLEMS.—To acquire some knowledge of the principles and methods of research each student works on an individual problem in the field of her major interest. Year course. 4 s.h.

PROFESSOR NAHM

RELATED COURSES IN OTHER DEPARTMENTS
FOR MAJORS IN EDUCATIONAL PSYCHOLOGY, ELEMENTARY EDUCATION,
AND SECONDARY EDUCATION

Philosophy 208, 242; Psychology 206, 209, 212, 215, 226, 306, 309, 310; Sociology 249, 381, 382.

FOR MAJORS IN PUBLIC SCHOOL ADMINISTRATION

Economics 217, 233, 234, 236; Political Science 209, 230, 231, 241-242, 291, 292; Sociology 233, 235, 237, 243, 246.

FOR MAJORS IN HISTORY AND PHILOSOPHY OF EDUCATION

History 209-210; Philosophy 205, 208, 223; Religion 395, 396; Sociology 286, 381, 382.

ENGLISH

PROFESSOR IRVING, CHAIRMAN—2G5 WEST DUKE BUILDING; PROFESSOR BAUM, DIRECTOR OF GRADUATE STUDIES—402 LIBRARY; PROFESSORS BOYCE, BRINKLEY, GILBERT, GOHDES, TURNER, AND WARD

The department offers graduate work leading to the A.M. and Ph.D. degrees. Students intending to major in English should have taken enough undergraduate courses in literature to enable them to pursue graduate studies profitably. To satisfy the requirements for the A.M. degree a student must (a) elect 203-204 (3 or 6 semester hours); one of the "period courses" (215, 216; 219, 220; 221, 222; 223, 224; 229, 230; 233, 234; 251, 252); an appropriate seminar; and 9 (or 6) additional semester hours; and (b) write a thesis. A statement of the requirements for the Ph.D. degree may be obtained from the Director of Graduate Studies.

In 1954-55 the courses offered are 201, 202, 203, 204, 215, 216, 218, 219, 220, 227, 229, 230, 231, 233, 234, 245, 251, 252, 349, 350 *a* and *e*.

FOR SENIORS AND GRADUATES

201, 202. ANGLO-SAXON.—In the first semester, an introduction to the language, with the reading of selected prose and of some of the shorter poems; in the second semester, the *Beowulf*. 6 s.h.

PROFESSOR BAUM

203, 204. CHAUCER.—Reading and interpretation of the text; in the first semester, the principal *Canterbury Tales*; in the second, the *Troilus* and the minor poems. A reading report and a term paper. 6 s.h.

PROFESSOR BAUM

205, 206. MIDDLE ENGLISH.—Close study of selected texts, with attention to the development of the language and to the history of the literature from 1200 to 1400. A term paper each semester. 6 s.h.

PROFESSOR BAUM

215, 216. ELIZABETHAN DRAMA.—Careful study of one or two major dramatists (Jonson or Beaumont and Fletcher) and extensive reading in the other writers (Heywood, Ford, Massinger, Marlowe, Middleton) with emphasis on the nature and qualities of their work in relation to its historical background. Exposition of plays, reports, and a term paper each semester. 6 s.h.

PROFESSOR GILBERT

217. MILTON.—Milton's poetry and prose, with emphasis on the major poems. 3 s.h.

PROFESSOR GILBERT

218. SPENSER.—The reading of Spenser's work, with chief attention to *The Faerie Queene*. 3 s.h.

PROFESSOR GILBERT

219, 220. THE EIGHTEENTH CENTURY.—Swift, Pope, Defoe, Addison, Steele, and others are studied in the first semester; in the second, Gray, Johnson, Boswell, Goldsmith, the letter writers, and the early Romantic poets. Lectures, oral reports, and a term paper each semester. 6 s.h.

PROFESSOR IRVING

221, 222. ENGLISH LITERATURE OF THE EARLY NINETEENTH CENTURY.—The British Romantic poets and prose writers from Scott to the early Carlyle, with special attention to Wordsworth, Coleridge, and Keats. While these writers will be approached historically, the main object will be to understand and estimate the aesthetic and ethical values of their writings. Discussion and short papers. 6 s.h.

223, 224. ENGLISH LITERATURE OF THE LATER NINETEENTH CENTURY.—Some of the most important works of the period are discussed in class; the background is filled in by lectures and assigned reading. The first semester is devoted chiefly to Carlyle, Dickens, Thackeray, Tennyson, and Browning; the second semester to Arnold, Ruskin, Pater, George Eliot, Meredith, the Pre-Raphaelites, and Swinburne. A term paper each semester. 6 s.h.

PROFESSOR BAUM

227. LITERARY CRITICISM.—A study of the Greek and Roman critics, in chronological order but with emphasis on their permanent value rather than on the mere history; also of the Continental and English critics to about 1700. Lectures, reports, and a term paper. 3 s.h.

PROFESSOR GILBERT

229, 230.—AMERICAN LITERATURE, 1800-1870.—The writers emphasized in the first semester are Emerson, Thoreau, and Hawthorne; in the second semester, Poe and Melville. In the first semester some attention is given also to Edwards, Franklin, Bryant, Longfellow, Holmes, Whittier, Lowell, and Parkman; and in the second semester, to Byrd, Jefferson, Paine, Freneau, Brown, Irving, Cooper, Kennedy, Simms, Timrod, and Lincoln. A term paper each semester. 6 s.h. (E)

PROFESSOR TURNER

231. EMERSON.—A study of Emerson's ideas as reflected in selected examples of his essays and poems. One test and one term paper. 3 s.h. (E)

PROFESSOR GOHDES

232. WHITMAN.—A detailed study of *Leaves of Grass* and of selected prose works. One test and one term paper. 3 s.h. (E)

PROFESSOR GOHDES

233. AMERICAN LITERATURE 1870-1900.—Selected works of the chief authors of the period, including Whitman, Lanier, Mark Twain, James, Howells, Crane, and Emily Dickinson. The lectures will deal with the social background as well as the literary trends and the careers of the major authors. A term paper. 3 s.h. (E)

PROFESSOR TURNER

234. AMERICAN LITERATURE OF THE TWENTIETH CENTURY.—Selected works of representative authors, including Dreiser, Edith Wharton, Mencken, Lewis, Willa Cather, O'Neill, Robinson, Frost, Eliot, Hemingway, and Faulkner. The lectures will deal primarily with literary trends as shaped by the social background. One test and one term paper. 3 s.h. (E)

PROFESSOR GOHDES

239. SHAKESPEARE.—A study of the plays and poems, with attention to sources, earlier criticism, and the work of Shakespeare's contemporaries. 3 s.h.

PROFESSOR GILBERT

245. THE EIGHTEENTH-CENTURY NOVEL.—Richardson, Fielding, Smollett, and Sterne are emphasized. Some attention is given to earlier prose fiction and to other contributing literary patterns. Lectures and short papers. 3 s.h.

PROFESSOR BOYCE

251, 252. ENGLISH LITERATURE OF THE SEVENTEENTH CENTURY.—A survey of the major works in prose, poetry, and drama from 1600 to the death of Dryden. Lectures, reports and a term paper each semester. 6 s.h.

PROFESSOR WARD

269, 270. SOUTHERN LITERATURE.—The principal writers discussed during the first semester are Byrd, Jefferson, Wirt, Kennedy, the Cooke brothers, Legaré, Simms, Timrod, Hayne, Longstreet and other humorists, and the poets of the Civil War. Considerable attention is paid to the historical and cultural background and to Northern and British authors who wrote about the South. An oral report and a term paper each semester. 6 s.h.

274. AMERICAN HUMOR.—The development of the native tradition in the Down-East humorists and the humorists of the Old Southwest. Extensive reading in Mark Twain and his contemporaries, and some attention to the continuation of the tradition after Mark Twain. 3 s.h. (E) PROFESSOR TURNER

FOR GRADUATES

349, 350. SEMINAR COURSES.—An introduction to bibliography and methods of research. One of these courses is required of all candidates for the degree of Master of Arts. 6 s.h.

(a) SIXTEENTH AND SEVENTEENTH CENTURIES.

PROFESSORS GILBERT AND WARD

(b) EIGHTEENTH CENTURY.

PROFESSORS IRVING AND BOYCE

(c) EARLY NINETEENTH CENTURY.

(d) LATER NINETEENTH CENTURY.

PROFESSOR BAUM

(e) AMERICAN LITERATURE.

PROFESSORS GOHDES AND TURNER

FORESTRY

PROFESSOR KORSTIAN, CHAIRMAN AND DIRECTOR OF GRADUATE STUDIES—308 SOCIAL SCIENCE; PROFESSORS HARRAR, KRAMER, SCHUMACHER, AND WOLF; ASSOCIATE PROFESSOR ANDERSON; ASSISTANT PROFESSOR STOLTENBERG

Major and minor work is offered in the scientific aspects of forestry leading to the Master of Arts and Doctor of Philosophy degrees. Work for these degrees may be pursued only in forest-tree physiology, wood anatomy and properties, forest pathology, silvics, forest soils, forest mensuration, forest entomology, and forest economics. College graduates who have had specialized training in botany or soil science and in allied basic subjects, such as physics, chemistry, geology, and zoology, may pursue graduate study and research only in the specialized fields for which their previous work has qualified them. Students who do not have previous training in forestry will be required to complete a minimum of thirty semester hours of approved work in forestry as a preliminary requirement to advanced study for the A.M. and Ph.D. degrees. The holders of these degrees will not be regarded as professionally trained foresters. For information on professional training in forestry, see *Bulletin of the School of Forestry*. For detailed information concerning admission to the Graduate School and for regulations governing candidacy for the A.M. and Ph.D. degrees and for other regulations, consult the proper pages in this *Bulletin*.

FOR SENIORS AND GRADUATES

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1 and 2, or equivalent. 4 s.h. PROFESSOR WOLF

231. FOREST ENTOMOLOGY.—Morphology, general classification, life histories, and control of insects injurious to forest trees, logs, and lumber. 3 s.h.

ASSOCIATE PROFESSOR ANDERSON

251. SAMPLING METHODS IN FORESTRY.—Statistical background for solution of sampling problems with special reference to sample inventory of a forest property. Offered both semesters. Prerequisite: Forestry 5151. 3 s.h.

PROFESSOR SCHUMACHER

252. FOREST MENSURATION.—Empirical equation and curve fitting appropriate for construction of timber yield tables, tree volume and taper tables; significance tests and graphical solution of equations. Assignments require operation of calculating machines. Prerequisite: Forestry 251. 3 s.h. PROFESSOR SCHUMACHER

254. DENDROLOGY.—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of botany. 3 s.h. PROFESSOR HARRAR

257. DESIGN OF FORESTRY EXPERIMENTS AND ANALYSIS OF DATA.—Role of experimental design in field and laboratory, and statistical analysis of data as aspects of scientific method in forest research. 5 s.h. PROFESSOR SCHUMACHER

259. **PROPERTIES OF WOOD.**—The chemical nature of wood substance and its industrial chemical derivatives. Wood-moisture relationships; pertinent non-mechanical physical properties; mechanical properties and factors affecting the strength of wood; standard timber testing procedures. Uses of woods as determined by their properties. Prerequisites: one year of college chemistry; one course in college physics. 3 s.h. PROFESSOR HARRAR

260. **WOOD ANATOMY.**—Study of the physical features and the gross and minute structural characteristics of wood leading to the identification of the commercial woods of the United States, and the important tropical woods used in American wood-working industries. Elementary microtechnique. Prerequisite: one year of botany. 3 s.h. PROFESSOR HARRAR

261. **FOREST SOILS.**—Origin, development, and classification of soils with special emphasis on those developed in humid climates; morphological, physical, and chemical properties of soils in relation to growth of trees; effect of forests on soils. Prerequisites: Chemistry 1 and 2, and Physics 1, or equivalents; physical geology, mineralogy, petrology, and analytical chemistry are also desirable. 3 s.h.

264. **SILVICS.**—Ecological foundations of silviculture with special reference to forest site factors; influence of forests on their environment; growth and development of trees and stands; origin, development, and classification of forest communities; methods of studying forest environments. Desirable prerequisites: plant physiology, plant ecology, and Forestry 261, or equivalent. 3 s.h. PROFESSOR KORSTIAN

276. **FORESTRY POLICY.**—Objective study and analysis of the development of public land and forestry policies in the United States, present policies of public and private forestry organizations, and current policy issues in the light of economic and other criteria. 2 s.h. ASSISTANT PROFESSOR STOLTENBERG

277. **ECONOMICS OF FORESTRY.**—Principles of economics used in the analysis of factors affecting the supply of forest products, pricing of stumpage and primary forest products, factors affecting the demand for forest products, economic characteristics and problems of the major forest products industries; analysis of such specific private forestry problems as marketing, forest ownership pattern, taxation, credit, risk, and economic fluctuations. Prerequisite: at least one course in the principles of economics. 3 s.h. ASSISTANT PROFESSOR STOLTENBERG

FOR GRADUATES

323-324. **ADVANCED FOREST PATHOLOGY.**—Advanced study and research on life histories and control of diseases of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and forest pathology. Credits to be arranged. PROFESSOR WOLF

326. **ADVANCED FOREST SOILS.**—Interrelations of the physical, chemical, and biological characteristics of forest and range soils. Prerequisites: analytical chemistry and Forestry 261. 3 s.h.

351-352. **ADVANCED PHYSIOLOGY OF FOREST TREES.**—Advanced study and research on problems in physiology of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and plant ecology or silvics. Credits to be arranged. PROFESSOR KRAMER

356. **SEMINAR IN FOREST ECONOMICS.**—Examination and discussion of the application of economic concepts in forestry, the potential contribution of economic analysis to private and public forest management; current research in forest economics. Prerequisite: Forestry 277 or equivalent; courses in economic theory are desirable. 2 s.h. ASSISTANT PROFESSOR STOLTENBERG

357-358. **RESEARCH IN FORESTRY.**—Credits to be arranged. Students who have had adequate training may do research under direction of members of the Faculty in the following branches of forestry:

a. **SILVICS.**—Prerequisites: Forestry 254, 261, and 264, or equivalents.

PROFESSOR KORSTIAN

b. **FOREST SOILS.**—Prerequisite: Forestry 261 or equivalent.

e. FOREST ECONOMICS.—Prerequisite: Forestry 277 or equivalent.

ASSISTANT PROFESSOR STOLTENBERG

f. PROPERTIES OF WOOD.—Prerequisites: Forestry 259 and 260, or equivalents.

PROFESSOR HARRAR

g. FOREST MENSURATION.—Prerequisites: Forestry SI51, 251, and 252, or equivalents.

PROFESSOR SCHUMACHER

h. FOREST ENTOMOLOGY.—Prerequisite: Forestry 231 or equivalent.

ASSOCIATE PROFESSOR ANDERSON

GERMANIC LANGUAGES AND LITERATURE

PROFESSOR VOLLMER, CHAIRMAN AND DIRECTOR OF GRADUATE STUDIES—106A SOCIAL SCIENCE; ASSOCIATE PROFESSOR SHEARS

The Department of German offers graduate work leading to the A.M. degree. Students who expect to major in German should have had sufficient undergraduate courses in Germanic languages to enable them to proceed to more advanced work.

Students who wish to take courses in German for a minor should normally have completed a third-year course (in exceptional cases, a second-year course) of College German with acceptable grades.

For 1954-55 the courses planned are 203-204, 207-208.

203-204. EIGHTEENTH CENTURY.—Eighteenth-century German literature in its relation to contemporary European philosophy. 6 s.h.

PROFESSOR VOLLMER

207-208. GERMAN ROMANTICISM.—The course covers the entire field of German Romanticism from 1800 to 1850. 6 s.h.

PROFESSOR VOLLMER

209-210. KLEIST, GRILLPARZER, AND HEBBEL.—A study of the leading representatives of German drama in the first half of the nineteenth century. 6 s.h.

211-212. HEINRICH HEINE.—A study of the German poet and his immediate successors in the movement known as *Jungdeutschland*. 6 s.h.

PROFESSOR VOLLMER

213-214. LITERATURE OF THE EMPIRE, 1871-1914.—A study of the literature of this period with special emphasis on a few leading writers such as Fontane, Hauptmann, Mann, and Hesse. 6 s.h.

ASSOCIATE PROFESSOR SHEARS

RELATED COURSES IN OTHER DEPARTMENTS

The following courses in other departments are recommended to students, who are majoring in Germanics, as particularly valuable in building a proper background for Germanic studies:

(a) Graduate courses in literature or philology, offered by the ancient and modern language departments, to be selected after consultation with the Germanic Department.

(b) Graduate courses in history and philosophy, offered by those departments, to be selected after consultation with the Germanic Department.

HISTORY

PROFESSOR SYDNOR, CHAIRMAN—101 LIBRARY; PROFESSOR CARROLL, DIRECTOR OF GRADUATE STUDIES—406 LIBRARY; PROFESSORS CLYDE, CURTISS, HAMILTON, LANNING, MANCHESTER, AND WOODY; ASSOCIATE PROFESSORS FERGUSON, NELSON, PARKER, ROPP, AND WATSON; ASSISTANT PROFESSOR STEVENS

A student who intends to work for an A.M. degree in history must present a total of eighteen semester hours of credit for undergraduate courses in history, of which six hours must be in American History if he plans to take his major in that field.

A candidate for the degree of Doctor of Philosophy in history is required to prepare himself in four fields of history, one of which must be the history of the United States and another the history of Western Europe. The Department offers graduate instruction in the following fields: Western Europe; the United States; Great Britain; Latin America; American Foreign Relations; the Far East in the modern period; Russia; Military history.

For 1954-55 the courses planned are as follows: 205-206, 209-210, 230, 231-232, 263-264, 307, 315, 321, 337, 217-218, 225-226, 227-228, 241-242, 245-246, 267-268, 269-270, 305, 317, 343, 312, 320.

AMERICAN HISTORY

FOR SENIORS AND GRADUATES

203-204. **THE UNITED STATES, 1850-1900.**—The rise of sectionalism, secession, wartime problems of the Union and Confederacy, political and economic adjustments of Reconstruction, the status of the Negro, the New South, problems of capital and labor, the agrarian revolt, political parties and reforms, the Spanish-American War. 6 s.h.

PROFESSOR WOODY

205-206. **THE UNITED STATES IN THE TWENTIETH CENTURY.**—The emergence of the United States as a major power; attention is focused on domestic developments and conflicting theories of expansion and federal power. Emphasis in the first semester is on the progressive era and the first World War; the second semester is devoted to the twenties and to the Franklin Roosevelt administration. 6 s.h.

ASSOCIATE PROFESSOR WATSON

209-210. **CONSTITUTIONAL HISTORY OF THE UNITED STATES, 1760 TO THE PRESENT.**—A study of the basic problems in forming the Constitution; of its development through the major crises in the history of the United States; of the effects of changing social, cultural, economic, and political conditions on the Constitution. 6 s.h.

ASSISTANT PROFESSOR STEVENS

215-216. **FOREIGN POLICY AND DIPLOMACY OF THE UNITED STATES.**—The work in the first semester, covering the period 1775-1877, deals with such topics as the origins and evolution of basic foreign policies; isolation from Europe; paramount interests in Latin America, including the Monroe Doctrine; international co-operation in the Far East. The work in the second semester, covering the period since 1877, deals with such topics as the rise of the new Manifest Destiny; beginnings of American imperialism in Latin America and the Far East; the failure of traditional neutrality in the first World War; postwar conflicts between isolation and collective security; involvement in the second World War. 6 s.h.

PROFESSOR CLYDE

230. **THE PORTUGUESE EMPIRE AND THE RISE OF BRAZIL.**—The course will deal with Portuguese explorations, the establishment of the Portuguese Empire in the East, the transplanting of Portuguese culture overseas and the rise of a native Brazilian civilization. 3 s.h.

PROFESSOR MANCHESTER

231-232. **THE HISPANIC COLONIES AND REPUBLICS IN AMERICA.**—The development of the Iberian states as colonizing powers, the Conquest of America, the Spanish treatment of the Indian, the contest between Spain and other European nations over America, the independence movement, the struggle for stable government, the rise of liberalism with special emphasis upon Mexico from the Revolution of 1910 to the present, and basic inter-American developments. 6 s.h.

PROFESSOR LANNING

233-234. **THE INSTITUTIONAL, CULTURAL, AND SOCIAL HISTORY OF HISPANIC AMERICA.**—The first semester of this course deals with subject races, the development of mixed breeds, the governmental system, the Church and the Inquisition, and Spanish culture with emphasis upon university subjects. In the second semester the work deals with the political ideas of the wars of independence, revolution and dictatorship, the rise of public education, public health, land reform, and the proletarian movement. 6 s.h.

PROFESSOR LANNING

263-264. **AMERICAN COLONIAL HISTORY AND THE REVOLUTION, 1606-1783.**—The growth of institutions and economic life in the English colonies; the American Revolution. 6 s.h.

PROFESSOR WOODY

FOR GRADUATES

307. **SEMINAR IN AMERICAN POLITICAL HISTORY.**—Year course. 2 s.h.

PROFESSOR SYDNOR

315. SEMINAR IN SOUTHERN HISTORY.—Year course. 2 s.h.

PROFESSOR WOODY

321. SEMINAR IN THE HISTORY OF SPAIN, HISPANIC AMERICA, AND INTER-AMERICAN RELATIONS.—Year course. 2 s.h.

PROFESSOR LANNING

336. POLITICAL HISTORY OF THE UNITED STATES, 1783-1860.—Among the topics treated are public issues, political ideas, forms of party organization, and techniques for attaining personal and party success in politics. Year course. 4 s.h.

PROFESSOR SYDNOR

337. SOCIAL AND ECONOMIC LIFE OF THE OLD SOUTH.—Conditions and trends in the South in respect to population movements, transportation, agriculture, slavery, urban life, commerce, manufacturing, religion, education, and other intellectual activities. Year course. 4 s.h.

PROFESSOR SYDNOR

EUROPE AND THE FAR EAST

FOR SENIORS AND GRADUATES

217-218. EUROPE SINCE 1870.—International relations since the Franco-German War is the chief subject of the study in this course; special emphasis is placed upon the underlying economic and political influence. 6 s.h.

PROFESSOR CARROLL

221-222. THE AGE OF THE RENAISSANCE.—The decline of characteristic features of medieval civilization and the rise of modern European institutions with particular attention to intellectual movements from Dante to Erasmus. 6 s.h.

ASSOCIATE PROFESSOR NELSON

225-226. THE AGE OF THE REFORMATION.—A survey of European civilization from 1500 through the Peace of Westphalia. 6 s.h.

ASSOCIATE PROFESSOR NELSON

227-228. EUROPE IN THE NINETEENTH CENTURY.—A study, beginning with the career of Napoleon Bonaparte, of the forces and personalities influential in the nineteenth century. Emphasis in the first semester is on the problems of the biographer; in the second, on those of a student of national communities. 6 s.h.

ASSOCIATE PROFESSOR PARKER

241-242. THE FAR EAST.—The history of the Western impact on Eastern Asia in the 19th and 20th centuries. Emphasis is placed on such matters as commercial and colonial expansion, the opening of China and Japan, the development by the Western Powers and Japan of colonial, imperialistic, and nationalistic interests, and the rise of Communist power in Asia. 6 s.h.

PROFESSOR CLYDE

243-244. THE UNITED STATES AND THE FAR EAST.—An historical analysis of American relations with the peoples of Eastern Asia during the 19th and 20th centuries. 6 s.h.

PROFESSOR CLYDE

245-246. WAR IN THE MODERN WORLD.—This course is concerned with the relations between warfare and modern political, economic and social conditions. Special attention is given to the development of British and American military methods and to the events of the American Civil War and the two World Wars. The work in the first semester deals with Clausewitz's theories of warfare and the period from the introduction of gunpowder to 1871; in the second semester there is more detailed analysis of recent land, sea, and air warfare. 6 s.h.

ASSOCIATE PROFESSOR ROPP

261-262. RUSSIA IN THE TWENTIETH CENTURY.—A study of the background of the Revolution of 1917 followed by an analysis of the history and policies of the Soviet state. 6 s.h.

PROFESSOR CURTISS

267-268. THE TRANSITION FROM MEDIEVAL TO MODERN ENGLAND.—A study of the changes in English society and ideas from the time of Edward III to that of Elizabeth. 6 s.h.

ASSOCIATE PROFESSOR FERGUSON

269-270. ENGLISH HISTORY FROM THE TUDOR PERIOD TOWARD THE PRESENT.—Emphasis is on political and governmental leaders, events, and institutions of selected periods and on the underlying forces that shaped them. 6 s.h.

PROFESSOR HAMILTON

FOR GRADUATES

305. SEMINAR IN THE HISTORY OF ENGLAND AND THE BRITISH EMPIRE.—The work consists of practical training in the methods of historical research based on sources for modern British history. Year course. 2 s.h.

PROFESSOR HAMILTON

317. SEMINAR IN RECENT EUROPEAN HISTORY.—Year course. 2 s.h.

PROFESSOR CARROLL

343. SEMINAR IN THE HISTORY OF AMERICAN FOREIGN RELATIONS AND THE FAR EAST.—Particular attention is given to critical examination of the bibliography of the field. Year course. 2 s.h.

PROFESSOR CLYDE

HISTORIOGRAPHY AND THE TEACHING OF HISTORY

FOR GRADUATES

312. SEMINAR IN THE TEACHING OF HISTORY IN COLLEGE.—The work in this course is intended to acquaint students with the problems involved in teaching history in college. It includes critical observation of the teaching by members of the History Staff in Duke University. Year course. 2 s.h.

PROFESSOR MANCHESTER AND PROFESSOR HAMILTON

This course is required of all candidates for the degree of Doctor of Philosophy who are in residence as many as two years at Duke University unless excused therefrom by the Department.

320. HISTORIOGRAPHY.—A critical study of the process of finding, appraising, and interpreting the sources of history and of the presentation of the results in narrative. Works of important historians from Herodotus to the present are analyzed. The student undertakes specific exercises in research, criticism, and narration. There is consideration of such general topics as schools, theories, philosophies, and the function of history. Year course. 4 s.h.

ASSOCIATE PROFESSOR NELSON

This course is required of all candidates for the degree of Doctor of Philosophy who are in residence as many as two years at Duke University unless excused therefrom by the Department.

RELATED COURSES IN OTHER DEPARTMENTS

Economics 215, 216, 231, 311-312; Political Science 223, 224, 225, 226, 227, 228, 229, 231. Religion 309, 395, 396; Sociology 382.

MATHEMATICS

PROFESSOR GERGEN, CHAIRMAN—134 PHYSICS BUILDING; PROFESSOR ROBERTS, DIRECTOR OF GRADUATE STUDIES—230 PHYSICS BUILDING; PROFESSORS CARLITZ, DRESSEL, ELLIOTT, AND THOMAS

Graduate work in the Department of Mathematics is offered leading to the A.M. and Ph.D. degrees. The student, in his undergraduate work, must have had courses in differential and integral calculus, and at least 6 semester hours of other courses in mathematics on the junior or senior level.

The A.M. degree with a major in mathematics is awarded primarily on the basis of scholarship. Of the 24 semester hours of course work required for this degree, 18 semester hours must be taken in the Department of Mathematics.

The Ph.D. degree in mathematics is awarded upon the demonstration of ability and training in research. The original dissertation, therefore, becomes the most important of the formal requirements for this degree.

Because of the important literature of mathematics written in German and French, the student must have a practical reading knowledge of these languages near the beginning of his graduate study.

For 1954-55 the courses planned are 235-236, 247-248, 271-272, 285-286, 291-292, 337-338.

FOR SENIORS AND GRADUATES

227-228. THEORY OF NUMBERS.—Congruences, arithmetic functions, compound moduli, quadratic reciprocity, Gauss sums, quadratic forms, sums of squares. Prerequisite: calculus. 6 s.h. PROFESSOR CARLITZ

229-230. ALGEBRAIC NUMBERS.—Ideals, unique factorization, divisors of the discriminant, determination of the class number. Prerequisite: theory of equations. 6 s.h. PROFESSOR CARLITZ

235-236. ABSTRACT ALGEBRA.—Groups, fields, rings, matrices, quadratic and bilinear forms, general Galois theory, hypercomplex systems. Prerequisite: calculus. 6 s.h. PROFESSOR CARLITZ

247-248. ARITHMETIC OF POLYNOMIALS.—Field theory, detailed study of finite fields, special polynomials and functions, valuation theory, the zeta function. Prerequisite: Mathematics 235 or consent of the instructor. 6 s.h. PROFESSOR CARLITZ

253-254. DIFFERENTIAL GEOMETRY.—Curves and surfaces in three-dimensional Euclidean space, applicability, differential parameters, Riemannian geometry of n -space. Prerequisite: calculus. 6 s.h. PROFESSOR THOMAS

255-256. PROJECTIVE GEOMETRY.—Postulational, synthetic treatment centering around Desargues' theorem and the principle of projectivity. Conics, coordinates, order, continuity, metric properties. Prerequisite: calculus. 6 s.h. PROFESSOR THOMAS

271-272. INTRODUCTORY TOPOLOGY.—Topological properties of Euclidean spaces, set-theoretic and combinatorial methods. Prerequisite: calculus. 6 s.h. PROFESSOR ROBERTS

285. MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.—Vectors, line and surface integrals, tensors, complex variables, differential and integral equations. Prerequisite: Mathematics 53. 3 s.h. PROFESSOR DRESSEL

286. MATHEMATICAL ANALYSIS FOR CHEMISTS AND PHYSICISTS.—Wave equation, Fourier series, heat equations, telegraphic equation, Legendre polynomials, Bessel functions, Schrödinger's equation. Prerequisite: Mathematics 53. 3 s.h. PROFESSOR DRESSEL

291-292. THEORY OF FUNCTIONS.—Limits, implicit functions, power series, double series, Cauchy's theorem and its applications, residues, Riemann surfaces, conformal mapping. Prerequisite: calculus. 6 s.h. PROFESSOR GERGEN

FOR GRADUATES

325-326. REAL VARIABLE.—Number system, Lebesgue and Stieltjes integrals, topics in Fourier series. Prerequisite: Mathematics 291-292. 6 s.h. PROFESSOR GERGEN

337-338. EXISTENCE THEOREMS.—Systems of partial differential equations, Pfaffian systems, theorems of Cauchy, Riquier, and Cartan, singular integral varieties. Prerequisite: Mathematics 291-292. 6 s.h. PROFESSOR THOMAS

343-344. ORDINARY DIFFERENTIAL EQUATIONS.—Solution by separation of variables, exact differentials, integrating factors, solution in series. Cauchy's existence theorem, linear differential systems, singular points, partial differential equations equivalent to ordinary systems. Prerequisite: Mathematics 291-292. 6 s.h. PROFESSOR THOMAS

371-372. DIMENSION THEORY.—Abstract spaces, separation theory for Euclidean spaces, dimension theory. Prerequisite: Mathematics 271-272. 6 s.h. PROFESSOR ROBERTS

PHILOSOPHY

PROFESSOR NEGLEY, CHAIRMAN—3-1 WEST DUKE BUILDING; PROFESSOR BAYLIS, DIRECTOR OF GRADUATE STUDIES—3-1-3 WEST DUKE BUILDING; PROFESSOR PATTERSON; ASSISTANT PROFESSORS PEACH AND WELSH; VISITING ASSISTANT PROFESSOR BUCK; INSTRUCTOR, DR. CLARK

Candidates for the Ph.D. degree in Philosophy will be expected to acquire teaching proficiency in the general fields of philosophical investigation, and to demonstrate scholarly ability in at least one of those fields. The achievement of specialized competence will necessitate adequate acquaintance with pertinent fields of research. The student will be encouraged to take as much work in minor departments as time permits. Minor study need not be confined to a single department; individual programs will be arranged to suit the students' needs and interests.

The preliminary examinations in Philosophy are evaluated in terms of the ability of the student to continue graduate study; they are not to be interpreted as a comprehensive survey of course study at the graduate level. The student in philosophy will be expected to fulfill the language requirements and pass the departmental preliminary examinations before the end of the third semester of residence. Students who enter with an A.M. degree will be expected to pass the preliminary examinations before the end of the first year of residence. Information about general requirements, or about preliminary examinations, may be obtained by addressing a request to the Department.

For 1954-55 the courses planned are: 201, 203, 208, 209, 212, 217, 223, 224, 232, 236, 241, 251-252, 307, 331-332, 350-351.

FOR SENIORS AND GRADUATES

201. PHILOSOPHY OF ART.—A study of some fundamental issues in aesthetics, with particular reference to the fields of literature, music, and painting. Problems discussed include: the nature and purposes of the arts; meaning in the arts; art and morality; the role of standards in art criticism; aesthetic judgment; interpretation and evaluation. 3 s.h. (E) ASSISTANT PROFESSOR WELSH

203. CONTEMPORARY ETHICAL THEORIES.—Reading and discussion of twentieth-century American and British moralists. 3 s.h. (E) PROFESSOR BAYLIS

205. THE PHILOSOPHY OF HISTORY.—An inquiry into the logic and methodology of the knowledge of history, and into the metaphysical implications of history. 3 s.h. (E) PROFESSOR NEGLEY

208. POLITICAL PHILOSOPHY.—Analysis of the structure of social organization, with particular reference to the function of law in democratic politics. 3 s.h. (E) PROFESSOR NEGLEY

209. THE PHILOSOPHY OF RELIGION.—A critical and constructive study of the nature of religion, of its various forms and manifestations, and of its functions in human life. 3 s.h. (E) PROFESSOR PATTERSON

211. PLATO.—Undergraduate prerequisite: Philosophy 93. 3 s.h. (E) PROFESSOR PATTERSON

212. HISTORY OF MODERN PHILOSOPHY.—3 s.h. (E) ASSISTANT PROFESSOR PEACH

213 HISTORY OF AESTHETICS.—Theories of art and beauty from Pythagoras to Croce. 3 s.h. (E)

217. ARISTOTLE.—Undergraduate prerequisite: Philosophy 93. 3 s.h. (E) PROFESSOR PATTERSON

218. MEDIEVAL PHILOSOPHY.—A study of the philosophy of the Middle Ages with special attention to selected texts from the works of Christian, Jewish, and Arabian philosophers. 3 s.h. (E) PROFESSOR PATTERSON

223. CONTEMPORARY PHILOSOPHY: IDEALISM.—Examination and analysis of the idealist position in recent and contemporary philosophy, with special attention to the works of Bradley and Jordan. 3 s.h. (E) PROFESSOR NEGLEY

224. CONTEMPORARY PHILOSOPHY: REALISM.—A critical analysis, comparison, and evaluation of the several varieties of recent realistic theories, presentative and representative. 3 s.h. (E) PROFESSOR BAYLIS

225. BRITISH EMPIRICISM: LOCKE, BERKELEY, HUME.—3 s.h. (E)

231. PHILOSOPHY OF SCIENCE.—A historical and critical survey of the basic philosophical ideas underlying the development of modern science. 3 s.h. (E)

232. SPECIAL PROBLEMS IN PHILOSOPHY OF SCIENCE.—Investigation by students of advanced problems in philosophy of science with special attention to a field determined by student's interest. 3 s.h. (E) DR. CLARK

236. ORIENTAL PHILOSOPHY.—A study of the genesis of philosophical ideas in the Upanishads and the Bhagavadgita, and of the development of the orthodox systems and of the philosophies of the Jains and the Buddhists. 3 s.h. (E)

PROFESSOR PATTERSON

241. LOGIC.—Fundamental principles of valid deductive reasoning. 3 s.h. (E) DR. CLARK

250. PHILOSOPHICAL ANALYSIS.—A critical study of recent and contemporary essays in philosophical analysis, and an evaluation of the nature, methods, and results of this movement. 3 s.h. (E) PROFESSOR BAYLIS

251. SEMINAR: EPISTEMOLOGY.—3 s.h. (E) PROFESSOR BAYLIS

252. SEMINAR: METAPHYSICS.—3 s.h. (E) PROFESSOR BAYLIS

253. CONTEMPORARY BRITISH PHILOSOPHY.—A consideration of philosophical doctrines and methods which are characteristic of British philosophy today, with special emphasis on contrasts with American and continental views and approaches. 3 s.h. (E) VISITING ASSISTANT PROFESSOR BUCK

FOR GRADUATES

307. SEMINAR: KANT.—3 s.h. (E) PROFESSOR NEGLEY

331, 332. SPECIAL FIELDS OF PHILOSOPHY.—Directed reading and research in specialized fields not intensively covered by the course curriculum: intended primarily for Ph.D. candidates. 3 s.h. (E) ALL MEMBERS OF THE GRADUATE STAFF

350, 351. SEMINAR IN THE TEACHING OF PHILOSOPHY.—Required of all candidates for the Ph.D. degree in Philosophy. Discussion of the problems of teaching philosophy at the undergraduate level. Practice teaching in undergraduate discussion sections. 1 s.h. (E) ALL MEMBERS OF THE GRADUATE STAFF

PHYSICS

PROFESSOR NIELSEN, CHAIRMAN—119 PHYSICS BUILDING; ASSOCIATE PROFESSOR GREULING, ACTING DIRECTOR OF GRADUATE STUDIES—213 PHYSICS BUILDING; PROFESSOR HATLEY, GORDY, NEWSON, NORDHEIM, SPONER, AND LONDON; ASSOCIATE PROFESSOR FAIRBANK; ASSISTANT PROFESSORS LEWIS AND BLOCK

The Department of Physics offers graduate work leading to the A.M. and Ph.D. degrees. Course work is designed to give a broad basic foundation in classical and modern physics. All graduate students will be expected to acquire a thorough knowledge of the various branches of classical physics and some familiarity with modern physics and with basic laboratory skills. They will be required to take such course work in the 200 number courses as may be necessary to obtain this foundation.

The student will be required to take such course work as will best be adapted to the kind of work he will subsequently specialize in and to the kind of research he will undertake. The choice of minor will be similarly determined.

Since a practical reading knowledge of French and German is highly desirable for the student of physics, he should satisfy these language requirements as early as possible.

For 1954-55 the courses planned are: 201-202, 203, 213-214, 217-218, 220, 306, 315-316, 320, 324, 331, 341, 343, 351-352, 353-354, 365-366.

FOR SENIORS AND GRADUATES

201-202. **MECHANICS.**—The fundamental principles of Newtonian mechanics; general dynamics of systems of particles, and rigid bodies; the methods of Lagrange and Hamilton; generalized mechanics. Prerequisite: Physics 125. 6 s.h.

ASSISTANT PROFESSOR BLOCK

203. **ELECTRICITY AND MAGNETISM.**—Fundamentals of electricity and magnetism. Electrostatics and magnetostatics. Direct current circuits, and networks—bridges, potentiometers, galvanometers, alternating current circuits and networks. Electromagnetic waves. 3 s.h.

ASSISTANT PROFESSOR LEWIS

213-214. **CONTEMPORARY PHYSICS.**—A course which covers the fundamental concepts and the experimental basis of modern physics. Three lectures each week. 6 s.h.

ASSISTANT PROFESSOR LEWIS

217-218. **ADVANCED PHYSICS LABORATORY.**—Measurements involving the fields of mechanics, electricity, magnetism, heat, sound, optics and modern physics. 2-6 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

219. **INTRODUCTION TO ELECTRONICS.**—Fundamentals of electron tubes. Motion of charged particles, space charge, gaseous conduction. Electron tube circuits. Three hours of lecture and one three-hour laboratory per week. 4 s.h.

PROFESSOR GORDY

220. **ELECTRON CIRCUIT ANALYSIS.**—Linear and non-linear circuit analysis, electric oscillations, operation of filters, Fourier analysis of wave phenomena, coupling in electrical circuits. 3 s.h.

PROFESSOR GORDY

FOR GRADUATES

303-304. **THERMODYNAMICS AND STATISTICAL MECHANICS.**—Fundamental laws of thermodynamics and statistical mechanics with applications to physics and chemistry. Gas laws; transport phenomena; elements of quantum statistics. 6 s.h.

ASSOCIATE PROFESSORS FAIRBANK AND GREULING

306. **LOW TEMPERATURE PHYSICS.**—A study of the properties of matter near the absolute zero of temperature; superconductivity, liquid helium, adiabatic demagnetization. Prerequisite: Physics 303. 3 s.h.

ASSOCIATE PROFESSOR FAIRBANK

315-316. **PRINCIPLES OF QUANTUM THEORY.**—Original and fundamental concepts of quantum theory; wave and matrix mechanics; theory of measurements: exclusion principle and electronic spin. Prerequisite: Physics 201-202. 6 s.h.

PROFESSOR NORDHEIM

318-319. **ELECTROMAGNETIC FIELD THEORY.**—Electrostatics and potential theory; dielectric and magnetic media; the magnetic field of currents and the law of induction. Maxwell's electrodynamics; theory of wave optics; refraction; interference, and diffraction. Crystal optics. Prerequisites: Physics 126, 175. 6 s.h.

ASSOCIATE PROFESSOR GREULING

320. **THEORY OF ELECTRONS.**—Lorentz' equations of electrodynamics. Classical theories of dispersion, magnetism, and conductivity. Theory of relativity. Prerequisite: Physics 318-319. 3 s.h.

ASSOCIATE PROFESSOR GREULING

323. **THEORY OF ATOMIC SPECTRA.**—Excitation of spectra, computation of wave lengths from photographs of spectra, study of the structure of atomic spectra with applications. 3 s.h.

PROFESSOR SPONER

324. **THEORY OF MOLECULAR SPECTRA.**—A study of the structure of molecular spectra with applications. 3 s.h.

PROFESSOR SPONER

331. **MICROWAVE RADIATION.**—Microwave generators, cavity resonators, transmission lines, radiation propagation and detection. 4 s.h.

PROFESSOR GORDY

335. **MICROWAVE SPECTROSCOPY.**—Application of microwaves in the determination of molecular, atomic and nuclear properties. Stark and Zeeman effects in microwave spectroscopy. Magnetic resonance absorption. 3 s.h.

PROFESSOR GORDY

340. **STRUCTURE OF MATTER.**—Selected topics dealing with the constitution of matter, such as crystal structure and x-rays, the solid state and problems of molecular structure. 3 s.h.
PROFESSOR SPONER

341. **ADVANCED TOPICS IN QUANTUM THEORY.**—Quantum theory of radiation and collisions with special reference to nuclear and high energy physics. Prerequisite: Physics 315-316. 3 s.h.
PROFESSOR NORDHEIM

343. **NUCLEAR PHYSICS.**—Elementary theory of the deuteron; low energy neutron proton scattering; theory of nuclear reactions; penetration of potential barriers; nuclear energy levels. Prerequisite: Physics 315. 3 s.h.
PROFESSOR NEWSON

344. **ADVANCED NUCLEAR PHYSICS.**—The deuteron, nuclear forces, scattering of elementary particles, beta-radiation. Other aspects of nuclear physics susceptible of theoretical interpretation. Prerequisite: Physics 343. 3 s.h.
PROFESSOR NORDHEIM

351-352. **SEMINAR.**—A series of weekly discussions on topics related to the research projects under investigation in the Department. 2 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

353-354. **THESIS SEMINAR.**—Students who are properly qualified may carry on research work under the direction of members of the staff. 6 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

365-366. **CHEMICAL PHYSICS. STATISTICAL THEORY.**—General introduction to statistical mechanics and applications to chemical problems; solution theory, reaction velocity, changes of state, quantum statistics and the metallic state. Lectures, conferences, and assigned problems. 6 s.h.
PROFESSOR LONDON

367-368. **CHEMICAL PHYSICS. QUANTUM THEORY OF ATOMIC AND MOLECULAR STRUCTURES.**—Theory of atomic and molecular forces and the structure of matter. Lectures, conferences, and assigned problems. 6 s.h.

PROFESSOR LONDON

POLITICAL SCIENCE

PROFESSOR RANKIN, CHAIRMAN—308 LIBRARY; PROFESSOR WILSON, DIRECTOR OF GRADUATE STUDIES—405 NEW TOWER, LIBRARY; PROFESSORS COLE, CONNERY, HALLOWELL, AND VON BECKERATH; ASSOCIATE PROFESSOR BRAIBANTI

The Department of Political Science offers graduate work leading to the A.M. and Ph.D. degrees. Instruction is designed to prepare the student for teaching, for government service, and for other work related to public affairs. Before undertaking graduate study in political science, a student is ordinarily expected to have completed at least 12 semester hours of course work in political science, including some work in American government.

Fields of political science in which instruction is at present offered for candidates for the degree of Doctor of Philosophy are the following: American Government and Constitutional Law; Comparative Government; Political Theory; American State and Local Government; International Law; Public Administration. Candidates for the degree of Doctor of Philosophy who propose to major in political science must elect five fields, including Comparative Government and Political Theory; at least one of the five fields must be taken in a department other than the Department of Political Science.

In 1954-55 the courses planned are 207, 209, 221, 223, 224, 225, 226, 227-228, 229, 230, 231, 235, 241, 246, 271, 291, 310, 321, 325, 328, and 341.

FOR SENIORS AND GRADUATES

207. **AMERICAN CONSTITUTIONAL LAW AND THEORY.**—A study of leading principles of American government, as developed through judicial interpretation of the Constitution. 3 s.h.
PROFESSOR RANKIN

209. PROBLEMS IN STATE AND LOCAL GOVERNMENT IN THE UNITED STATES.—A study of the historical development of state and local governments, their present organizations and subdivisions, and their relation to each other. Special attention is given to the position of the states in the federal union through the study of federal-state, inter-state, and state-local relations. 3 s.h.

PROFESSOR RANKIN

211. POLITICAL INSTITUTIONS OF THE FAR EAST.—An analysis of the ideas underlying the development of government in Japan, China, and Korea. Study of the writings of Lao-tse, Confucius and the sacred books of Buddhism and Shinto. Particular attention is given to the theory of Confucian bureaucracy, the Taikwa Reform, the development of the Tokugawa administrative state, the constitutional reforms of Sun-Yat-sen in China and of the Meiji Era in Japan. 3 s.h.

ASSOCIATE PROFESSOR BRAIBANTI

212. INTERNATIONAL POLITICS OF THE FAR EAST.—An analysis of the relations of China, Japan, and Korea *inter se* and with outside powers, with emphasis upon changing power relationships within the Asian cultural sphere. 3 s.h.

ASSOCIATE PROFESSOR BRAIBANTI

221. INTERNATIONAL PUBLIC ORGANIZATION.—A study of the structure and functioning of the United Nations organs, of related specialized agencies such as the International Labor Organization, and of regional agencies such as the Organization of American States. 3 s.h.

PROFESSOR WILSON

223. POLITICAL THOUGHT TO THE SEVENTEENTH CENTURY.—A survey from the time of Plato to the close of the seventeenth century; Graeco-Roman, Patristic and Germanic thought; individualism and cosmopolitanism; effect of the Church-State controversy and the conciliar movement; medieval constitutionalism; legislative sovereignty. 3 s.h.

PROFESSOR WILSON

224. MODERN POLITICAL THEORY.—An historical survey and philosophical analysis of political theory from the beginning of the seventeenth to the middle of the nineteenth century. Attention is given to the rise of liberalism, the Age of Enlightenment, the romantic and conservative reaction, idealism and utilitarianism. 3 s.h.

PROFESSOR HALLOWELL

225. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European constitutional government and politics. 3 s.h.

PROFESSOR COLE

226. COMPARATIVE GOVERNMENT.—A comparative study of modern political institutions with particular attention to European authoritarian and dictatorial government and politics. 3 s.h.

PROFESSOR COLE

227-228. INTERNATIONAL LAW.—Elements of international law, particularly as interpreted and applied by the United States; rights and duties of states with respect to recognition, state territory and jurisdiction, nationality, diplomatic and consular relations, treaties, treatment of aliens, pacific settlement of disputes, international regulation of the use of force, and collective security. 6 s.h.

PROFESSOR WILSON

229. RECENT AND CONTEMPORARY POLITICAL THEORY.—The rise of positivism and its impact upon modern political thought, the origins of socialism, Marxism and its variants, socialism in the Soviet Union, nationalism, Fascism and National Socialism, the crisis in modern democracy, Christianity and the social order. 3 s.h.

PROFESSOR HALLOWELL

230. AMERICAN POLITICAL INSTITUTIONS.—A study of the formation and development of institutions of the national government in the United States, with historical and analytical treatment. Among other topics this course is concerned with the Constitutional Convention of 1787, and the development of Congress, the Presidency, and the Supreme Court. 3 s.h.

PROFESSOR RANKIN

231. AMERICAN POLITICAL THEORY.—An analysis of the main currents in American political thought from colonial beginnings to the present day, with emphasis upon the development of liberalism in America. 3 s.h.

PROFESSOR HALLOWELL

235. THE BRITISH COMMONWEALTH.—An analysis of the political relationships between the members of the Commonwealth and a comparative study of the governments of the Dominions, with particular reference to Canada. 3 s.h.
PROFESSOR COLE

241. ADMINISTRATIVE MANAGEMENT.—An advanced course in public administration with special attention being given to the development of scientific management, its application to government in the United States and a consideration of current problems in organization, procedures, work simplification, and management improvement. 3 s.h.
PROFESSOR CONNERY

242. NATIONAL ADMINISTRATION.—A study of the administrative organization, working concepts and procedures of the United States Government, illustrated through the operations of the Bureau of the Budget. 3 s.h.
PROFESSOR CONNERY

246. GOVERNMENT ADMINISTRATION AND PUBLIC POLICY.—Through use of the laboratory and case study techniques, a consideration of the types of administrative problems that the United States Government encounters in the field of public policy, and their possible solution. 3 s.h.
PROFESSOR CONNERY

271. SOCIOPOLITICS AND CAPITALISM.—Labor and labor policies in Western Europe and the United States in the nineteenth and twentieth centuries; the development of monopoly power and political power of labor in recent decades. 3 s.h.
PROFESSOR VON BECKERATH

291. PROBLEMS OF MUNICIPAL GOVERNMENT.—An analysis of problems relating to the structural system and activities of municipalities in the United States. 3 s.h.
PROFESSOR RANKIN

292. MUNICIPAL ADMINISTRATION.—A study of principles and methods relating to municipal administration in the United States. 3 s.h. PROFESSOR RANKIN

FOR GRADUATES

301-302. DEPARTMENTAL GRADUATE SEMINAR.—An introduction to research methodology, inter-disciplinary relationships and current research problems. Required of all graduate majors in political science. No credit.
PROFESSORS WILSON, RANKIN, COLE, HALLOWELL, CONNERY, BRAIBANTI,
OTHER MEMBERS OF THE FACULTY AND VISITING LECTURERS

310. SEMINAR IN STATE GOVERNMENT.—Open to students who have completed course 209 or its equivalent. 3 s.h.
PROFESSOR RANKIN

311. SEMINAR IN FAR EASTERN POLITICS.—Open to students who have completed course 211 or its equivalent. 3 s.h.

321. SEMINAR IN POLITICAL THEORY.—Open to students who have completed 6 semester hours in Political Science 223, 224, 229, 231 or their equivalents. 3 s.h.
PROFESSOR HALLOWELL

325. SEMINAR IN COMPARATIVE GOVERNMENT.—Open to students who have completed courses 225 and 226 or their equivalents. 3 s.h. PROFESSOR COLE

328. SEMINAR IN INTERNATIONAL LAW.—Open to students who have completed course 227-228 or its equivalent. 3 s.h.
PROFESSOR WILSON

341. SEMINAR IN PUBLIC ADMINISTRATION.—Open to students whose admission is approved by the instructor. 3 s.h.
PROFESSOR CONNERY

RELATED COURSES IN OTHER DEPARTMENTS

Economics 233, 237-238, 315, 316, 329, 365; History 215-216, 217-218, 233-234, 261-262; Philosophy 208; Religion 224, 394; Sociology 382.

RELATED COURSE WORK IN THE SCHOOL OF LAW

There may be graduate credit for course work completed in the Duke University School of Law.

PSYCHOLOGY

PROFESSOR RODNICK, CHAIRMAN—107 BIVINS HALL; PROFESSOR ZENER, DIRECTOR OF GRADUATE STUDIES—205 PSYCHOLOGICAL LABORATORY; PROFESSOR RODNICK, DIRECTOR OF CLINICAL TRAINING; PROFESSORS ADAMS, DAI, KOCH, KUDER, AND LUNDHOLM; ASSOCIATE PROFESSORS BANHAM, COHEN, AND KIMBLE; ASSISTANT PROFESSORS BORSTELMANN, COLLIER, GARMEZY, AND GUTTMAN

The Department of Psychology offers advanced work in general experimental psychology leading to the A.M. and Ph.D. degrees and in clinical psychology leading to the Ph.D. only.

Whatever the field of psychology in which a student eventually specializes, he is required to have a thorough background in the facts, methods, and theories of general psychology. Graduate programs are arranged to achieve this common background primarily during the first year, with specialization in course work reserved for subsequent years.

Normally, the candidate for the Ph.D. degree is expected, by the end of his second year, in addition to having worked out a program of studies, to have passed his language examinations, a departmental qualifying examination in his area of intended doctoral research, and the preliminary examination. By this time also his doctoral dissertation subject should be formulated. Emphasis is laid upon the completion of the dissertation, directed by a member of the staff, demonstrating competence and independence in the investigation of an original and significant problem.

As an integral part of their academic work during the first, second and fourth years, students specializing in clinical psychology will undertake field work in a variety of clinical settings. In addition, they will normally spend the third year in an appropriate, approved internship. The fourth year will be spent in residence at Duke University to complete the dissertation.

The field of minor work is not restricted, but it may be pointed out that the fields most relevant to graduate study in psychology are philosophy of science, sociology and anthropology, physiology, neuroanatomy, mathematics, and education.

Further details concerning the program of studies in psychology may be obtained from the Director of Graduate Studies in Psychology.

For 1954-55 the courses planned are 201-202, 203, 206, 209, 212, 215, 221-222, 223 (second semester only), 265, 266, 303-304, 305, 306, 308, 309, 310, 312, 313, 320, 322, 335-336, 341, 342, 371.

FOR SENIORS AND GRADUATES

201-202. PROSEMINAR.—An integrated core curriculum in general psychology, designed to provide an advanced background in the principles, and the empirical and theoretical methods, of the major fields of psychology. The topics include: scientific methods in psychology, biological foundations of behavior, motivation, learning, perception, behavior development, personality, the social determinants of behavior, and contemporary psychological theories. Required of all first year students. 9 s.h. each semester.

PROFESSORS ADAMS, KOCH, KUDER, RODNICK, AND ZENER;
ASSOCIATE PROFESSOR KIMBLE; ASSISTANT
PROFESSORS COLLIER AND GUTTMAN

203. DYNAMIC PSYCHOLOGY: CONATION AND OUR CONSCIOUS LIFE.—A systematic presentation of the psychology of adult human achievements, adaptive as well as creative, with emphasis upon the significance of these endeavors of the acts of experiencing. 3 s.h.

PROFESSOR LUNDHOLM

206. SOCIAL PSYCHOLOGY.—Kinds of membership character; psychology of social movements; propaganda; revolution; nationalism; war. 3 s.h.

PROFESSOR ADAMS

209. EXPERIMENTAL METHODS IN PSYCHOLOGY.—A study of methods for the identification, control, and recording of essential variables in psychological situations, with emphasis upon the relation of experimental techniques to problem formulation. Laboratory, lectures, and discussions. 3 s.h.

PROFESSOR ZENER; ASSOCIATE PROFESSOR KIMBLE;
ASSISTANT PROFESSORS COLLIER AND GUTTMAN

212. PHYSIOLOGICAL PSYCHOLOGY.—An advanced study of the interrelationships between psychological and physiological processes. 3 s.h.

ASSISTANT PROFESSOR GUTTMAN

215. DEVELOPMENTAL PSYCHOLOGY.—The environmental forces conditioning the development of personality structure and the mechanisms contributing to psychological growth; critical periods in character formation from infancy to senescence. 3 s.h.

PROFESSOR ADAMS

221-222. PROPRATICUM.—Lectures, demonstrations and practice in the use of basic procedures, projective and non-projective, employed in clinical psychology; principles of interpretation and reporting of test findings. Laboratory periods will be held in clinical field facilities. 3 s.h. each semester.

ASSISTANT PROFESSOR GARMEZY AND ALL MEMBERS
OF THE CLINICAL STAFF

223. ABNORMAL PSYCHOLOGY.—A systematic presentation of the psychology of functional mental disorders with emphasis on its bearing upon general psychological theory. 3 s.h.

PROFESSOR LUNDHOLM

236. THEORETICAL PSYCHOLOGY.—This course is devoted to the analysis of techniques of theory construction in psychology. The discussion of these methodological issues is co-ordinated with the analysis of concrete formulations in contemporary psychological theory. 3 s.h.

PROFESSOR KOCH

265. FUNDAMENTAL STATISTICAL PROCEDURES IN PSYCHOLOGY.—An introduction to the topics of distribution functions, large and small sample analyses, analysis of variance and experimental design. Prerequisite: Psychology 120 or equivalent. 3 s.h. [Second semester only.]

ASSISTANT PROFESSOR COLLIER

266. ADVANCED STATISTICS OF PSYCHOLOGICAL INVESTIGATION.—A continuation of Psychology 265 with the treatment of the following topics: non-parametric methods, correlation, multiple and partial correlation, and curve fitting. Prerequisite: Psychology 265. 3 s.h.

ASSISTANT PROFESSOR COLLIER

303-304. RESEARCH.—2 or 3 s.h.

ALL MEMBERS OF THE GRADUATE STAFF

305. PSYCHOPATHOLOGY.—An examination of behavior disorders, with particular emphasis on explanatory concepts and the evidence from research in this field. 3 s.h.

PROFESSOR RODNICK

306. SEMINAR IN DEVELOPMENTAL PSYCHOLOGY.—2 or 3 s.h.

PROFESSOR ADAMS

308. SEMINAR IN PSYCHOPATHOLOGY AND PERSONALITY THEORY.—3 s.h.

PROFESSOR RODNICK

309. PROBLEMS OF LEARNING.—3 s.h.

ASSOCIATE PROFESSOR KIMBLE

310. SEMINAR: SELECTED PROBLEMS IN THE DYNAMICS OF BEHAVIOR.—3 s.h.

PROFESSOR ZENER

312. SEMINAR IN THEORETICAL PSYCHOLOGY.—3 s.h.

PROFESSOR KOCH

320. SEMINAR IN THE THEORY OF MENTAL TESTS.—3 s.h.

PROFESSOR KUDER

322. SEMINAR IN PERSONNEL PSYCHOLOGY.—3 s.h.

PROFESSOR KUDER

335-336. CLINICAL PSYCHOLOGY PRACTICUM.—Seminar discussion and supervised field experience in the application of basic psychological procedures and principles to clinical cases in a variety of institutional settings. Prerequisite: Psychology 221 and 222. 3 s.h. fall semester, 6 s.h. spring semester.

ASSOCIATE PROFESSOR COHEN AND ALL MEMBERS
OF THE CLINICAL STAFF

341. SOCIETY, CULTURE AND BEHAVIOR DISORDERS.—A critical survey of current theories of the structure and genesis of psychoneurosis, with particular stress on psychoneurotic disturbances as problems of the self in relation to society and culture. 3 s.h. PROFESSOR DAI

342. PRINCIPLES OF PSYCHOTHERAPY.—A critical study of the current methods of treating behavior disorders, such as brief psychoanalytic therapy, non-directive methods and group procedures. Stress is laid on integration of the best workable procedures into a set of psychotherapeutic principles in a socio-psychological frame of reference as discussed in Psychology 341, which is a prerequisite: Case material will be used for purposes of illustration. 3 s.h. PROFESSOR DAI

371. PRE-SCHOOL BEHAVIOR PROBLEMS.—3 s.h.

ASSOCIATE PROFESSOR BANHAM

RELATED COURSES IN OTHER DEPARTMENTS

Education 208A, 208B, 209, 217, 227, 228, 258, 318; Philosophy 104, 203, 208, 223, 224, 232, 242, 301, 331-332a; Sociology and Anthropology 212, 238, 243, 246, 249, 271, 276, 330, 380; Zoology 229, 324, 341, 351-352, 355-356; Physiology 261-262; Anatomy 204.

RELIGION

PROFESSOR SMITH, DIRECTOR OF GRADUATE STUDIES—308 DIVINITY SCHOOL; PROFESSORS BEACH, CLARK, CUSHMAN, DAVIES, PETRY, AND STINESPRING; ASSISTANT PROFESSORS BROWNLEE AND SCHAFER

The Department of Religion offers graduate work leading to the A.M. and Ph.D. degrees. Students may major in one of three fields: (1) Biblical Studies; (2) Studies in Church History; and (3) Studies in Christian Thought. They will be expected to take such courses in one or both of the other fields as will conduce to an adequate understanding of their chosen fields of specialization.

In addition to course work in these major fields, students will take such other courses in cognate fields as will contribute to the enrichment of their major studies. For those majoring in Biblical Studies, courses in ancient language and literature are suggested; for those majoring in Church History, courses in history are suggested; and for those majoring in Studies in Christian Thought, courses in philosophy, political science, and sociology are suggested.

Students who intend to become candidates for the Ph.D. degree should take the required language examinations in both French and German not later than the beginning of the second year of residence.

For 1954-55 the courses planned are 201-202, 217, 220, 305, 309, 310, 311, 312, 313, 314, 316, 317, 319, 321, 322, 323, 324, 328, 331, 332, 334, 336, 391-392, 393, 394, 397, 398, 495, 498.

FIELD I. BIBLICAL STUDIES

201-202. FIRST HEBREW.—The principles and structure of the Hebrew language with translation of selected Old Testament narratives. 6 s.h.

PROFESSOR STINESPRING

205-206. ARABIC.—Introduction to the classical language and literature with some attention to the modern idiom. Hours to be arranged. 6 s.h.

PROFESSOR STINESPRING

207-208. SECOND HEBREW.—Samuel or Kings the first semester and Isaiah the second. 6 s.h.

ASSISTANT PROFESSOR BROWNLEE

217. THE NEW TESTAMENT IN GREEK.—Extensive reading of the Greek text of the New Testament, with special emphasis upon its interpretation. 3 s.h.

PROFESSOR CLARK

218. GALATIANS AND I CORINTHIANS.—A detailed study of two of Paul's major epistles, based on the Greek text. 3 s.h.

PROFESSOR DAVIES

220. I PETER AND THE GOSPEL OF JOHN.—A detailed study of two of the non-Pauline writings of the New Testament. The course will be based on the Greek text. 3 s.h.
PROFESSOR DAVIES

301. THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in Post-Exilic Judaism. 3 s.h.
ASSISTANT PROFESSOR BROWNLEE

304. ARAMAIC.—A study of the Aramaic portions of the Old Testament, and selected passages from the Targums, Midrashes, and Talmuds. Hours to be arranged. 3 s.h.
PROFESSOR STINESPRING

305. THIRD HEBREW.—A study of late Hebrew prose, with readings from Chronicles, Ecclesiastes, and the Mishnah. Hours to be arranged. 3 s.h.
PROFESSOR STINESPRING

306. ADVANCED HEBREW.—A course on the Dead Sea Scrolls. 3 s.h.
ASSISTANT PROFESSOR BROWNLEE

307. SYRIAC.—A study of the script and grammar, with readings from the Syriac New Testament and other early Christian documents. Some knowledge of Hebrew and Aramaic prerequisite. 3 s.h.
PROFESSOR STINESPRING

309. HISTORY OF THE ANCIENT NEAR EAST.—A specialized study of the civilizations of Egypt, Palestine, Syria, and Mesopotamia in the light of Biblical archaeology. 3 s.h.
PROFESSOR STINESPRING

310. OLD TESTAMENT PROPHECY.—The prophetic movement in Israel with special emphasis on the prophets of the eighth century B.C. 3 s.h.
PROFESSOR STINESPRING

311. THE LIFE AND TEACHINGS OF JESUS.—A study of the events and sayings of the historical Jesus, in the light of His mission. 3 s.h.
PROFESSOR CLARK

312. ADVANCED NEW TESTAMENT THEOLOGY.—An examination of the central aspects of New Testament theology. 3 s.h.
PROFESSOR DAVIES

313. THE APOSTOLIC FATHERS.—A study of the Christian development from Clement of Rome to Polycarp (90-155 A.D.), with readings in the Greek text. 3 s.h.
PROFESSOR CLARK

314. PATRISTIC THOUGHT.—A study of the development of early Christian doctrine to the period of Irenaeus. 3 s.h.
PROFESSOR DAVIES

316. HELLENISTIC RELIGIONS.—A study of the Gentile religions in the Roman Empire, at the beginning of the Christian era. 3 s.h.
PROFESSOR CLARK

317. THE SYNOPTIC GOSPELS.—A detailed study of their characteristics and contents, based upon the Greek text, with attention to their respective sources and to the development of synoptic criticism. 3 s.h.
PROFESSOR CLARK

318. TEXTUAL CRITICISM OF THE NEW TESTAMENT.—A study of the scientific recovery of the Greek text on which modern versions are based; manuscript discoveries; principles of textual criticism; practice in collating original manuscripts in the Duke collection. 3 s.h.
PROFESSOR CLARK

319. JUDAISM AND EARLY CHRISTIANITY.—A special study of the relation between Judaism and early Christianity. 3 s.h.
PROFESSOR DAVIES

RELATED COURSES IN OTHER DEPARTMENTS

Greek 257; Latin 258; Aesthetics, Art, and Music 215, 216.

FIELD II. STUDIES IN CHURCH HISTORY

330. THE CHURCH IN EUROPE SINCE 1800.—Emphasis is placed on the relation of the Church to the social, economic, and political life of Modern Europe. 3 s.h.
PROFESSOR PETRY

331. **THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.**—A study of the social teachings and contributions of the Christian Church prior to the Protestant Reformation. 3 s.h. PROFESSOR PETRY

332. **THE MEDIEVAL CHURCH.**—Outstanding characteristics of the Medieval Church, emphasizing theory, polity, institutions, sacraments, and worship. 3 s.h. PROFESSOR PETRY

334. **CHURCH REFORMERS AND CHRISTIAN UNITY.**—The work of such reformers as Marsilius of Padua, William of Ockham, Jean Gerson, Pierre d'Ailly, and Nicholas of Cusa in relation to ecclesiastical schism and the search for Christian unity through representative councils. 3 s.h. PROFESSOR PETRY

336. **HISTORY OF CHRISTIAN RENUNCIATION IN THE MIDDLE AGES.**—A study of the renunciatory ideal and spiritual practices with special reference to Benedictines, Franciscans, Lowland Mystics, and leading seculars. 3 s.h. PROFESSOR PETRY

RELATED COURSES IN OTHER DEPARTMENTS

History 221-222, 225-226; Ancient Languages and Literatures 257-258.

FIELD III. STUDIES IN CHRISTIAN THOUGHT

224. **CONCEPTIONS OF MAN IN WESTERN THOUGHT.**—An analysis and interpretation of important types of philosophical and theological theory. 3 s.h. PROFESSOR CUSHMAN

321. **PLATONISM AND CHRISTIANITY.**—An analysis of Plato's religious philosophy and a survey of its continuing influence in Hellenistic and Christian thought. 3 s.h. Prerequisite: Permission of the instructor. PROFESSOR CUSHMAN

322. **THEOLOGY AND PHILOSOPHY IN THE NINETEENTH CENTURY.**—Protestant thought from Schleiermacher to Troeltsch together with representative theologians of Britain. 3 s.h. PROFESSOR CUSHMAN

323. **HISTORY OF CHRISTIAN THOUGHT I.**—An historical study of theology in the ancient and medieval church. 3 s.h. ASSISTANT PROFESSOR SCHAFER

324. **HISTORY OF CHRISTIAN THOUGHT II.**—An historical study of theology from the Reformation. 3 s.h. ASSISTANT PROFESSOR SCHAFER

325. **PHILOSOPHICAL THEOLOGY I.**—Main problems in the history of philosophical theology. 3 s.h. PROFESSOR CUSHMAN

326. **PHILOSOPHICAL THEOLOGY II.**—Historical and constructive approach to the problem of faith and reason. 3 s.h. PROFESSOR CUSHMAN

328. **SEMINAR IN TWENTIETH CENTURY CONTINENTAL AND BRITISH THEOLOGY.**—Critical examination of the thought of Barth, Brunner, Berdyaev, Maritain, F. R. Tennant, and William Temple. 3 s.h. PROFESSOR CUSHMAN

391. **HISTORICAL TYPES OF CHRISTIAN ETHICS I.**—A critical study of representative statements of Christian ethical theory, through the early Reformation. Prerequisite: C.E. 27 or its equivalent. 3 s.h. MR. BEACH

392. **HISTORICAL TYPES OF CHRISTIAN ETHICS II.**—A continuation of C.E. 391, from the Reformation through current Christian ethical theory. Prerequisite: C.E. 391. 3 s.h. MR. BEACH

393. **THE CHRISTIAN INTERPRETATION OF HISTORY.**—A comparative examination of the chief secular and Christian theories of history current in Western thought. 3 s.h. PROFESSOR BEACH

394. **CHRISTIANITY AND THE STATE.**—The relation of the Christian theory of the State to political problems, with special consideration of the religious assumptions underlying democratic theory and practice and of the relationship of church to state. 3 s.h. PROFESSOR BEACH

395. **RELIGIOUS THOUGHT IN COLONIAL AMERICA.**—Consideration of the principal types of Protestant thought in colonial culture. 3 s.h. PROFESSOR SMITH

396. AMERICAN RELIGIOUS THOUGHT IN THE NINETEENTH CENTURY.—Comparative exposition of Orthodoxy and Liberalism. 3 s.h.

PROFESSOR SMITH

397. CURRENT AMERICAN THEOLOGY.—Critical appraisal of conflicting tendencies in American theological thought. 3 s.h.

PROFESSOR SMITH

398. MODERN AMERICAN CHRISTOLOGY.—An analysis of the historical development of modern American conceptions of the person and work of Christ. 3 s.h.

PROFESSOR SMITH

495. SEMINAR: JONATHAN EDWARDS AND JOHN WESLEY.—A comparative study of the major theological works of Edwards and Wesley. 2 s.h.

PROFESSOR SMITH

498. SEMINAR: THEOLOGY OF PAUL TILLICH.—An examination of Tillich's philosophical theology. 2 s.h.

PROFESSOR SMITH

RELATED COURSES IN OTHER DEPARTMENTS

Political Science 229, 231.

OTHER COURSES

Certain other courses listed in this bulletin and the *Bulletin of the Divinity School* may be taken for graduate credit provided that at the time of registration they are approved by the Director of Graduate Studies in Religion and by the Dean of the Graduate School.

ROMANCE LANGUAGES

PROFESSOR JORDAN, CHAIRMAN—214 CARR; PROFESSOR WALTON, DIRECTOR OF GRADUATE STUDIES—213 CARR; VISITING LECTURER KENISTON; PROFESSORS DAVIS AND FREDMORE; ASSOCIATE PROFESSOR CASTELLANO; ASSISTANT PROFESSOR DEMOREST

The Department of Romance Languages offers graduate work leading to the A.M. and Ph.D. degrees. In order to undertake graduate study in this Department, the student should normally have credit for four years of college courses in the chosen language, or 18 semester hours beyond the conventional two units offered at entrance to college. In addition to this minimum requirement, the student should have had one semester of review in composition and grammar.

It is recommended that candidates for the A.M. degree take a second Romance Language as the minor subject.

A candidate for the Ph.D. degree should be equipped to follow graduate courses in a second Romance Language. For this degree some training in Romance Linguistics will be required, the amount to be determined by the Department upon consideration of the student's preparation in the field.

Graduate students in this Department will be required to maintain oral practice in their major language through non-credit exercises provided by the Department.

For 1954-55 there will be offered throughout the year at least three courses in each language.

FRENCH

FOR SENIORS AND GRADUATES

210. THE AGE OF RICHELIEU.—An introduction to French life and thought in the literature of the early seventeenth century. The transition from the Renaissance to classical culture. Discussions of the baroque, the *Libertins*, the scientific rationalists, the Counter Reformation. Extensive reading in Corneille and Pascal. Lectures in French. 3 s.h.

ASSISTANT PROFESSOR DEMOREST

213. FRENCH CLASSICISM.—Its initial phase. Readings from Malherbe, Molière, Racine, Boileau, La Fontaine, La Rochefoucauld, Madame de Sévigné, La Bruyère, and others. 3 s.h.

PROFESSOR WALTON

214. FRENCH CLASSICISM.—Its final phase. Readings from Fontenelle, Saint-Simon, Abbé Prévost, Marivaux, Lesage, Montesquieu, Voltaire, and others. Main emphasis on Voltaire. 3 s.h. PROFESSOR WALTON

215, 216. THE MODERN FRENCH NOVEL.—A survey of the novel form from the seventeenth to the twentieth century, with particular attention to the analysis of fundamental literary trends; classicism, rationalism, romanticism, and realism. 6 s.h. PROFESSOR JORDAN

225. POLITICAL AND RELIGIOUS LITERATURE IN THE ROMANTIC PERIOD.—The Romantic outlook as it shapes political and religious literature from the Consulate to the Revolution of 1848. The mystics of conservatism, the prophets of a Romantic faith, and the heralds of a social republic. Lectures in French. 3 s.h. ASSISTANT PROFESSOR DEMOREST

227. FRENCH POETRY SINCE THÉOPHILE GAUTIER.—Readings from the principal figures of the Parnassian and Symbolist movements, including Baudelaire, Leconte de Lisle, Heredia, Verlaine, Rimbaud, Mallarmé and Régnier. 3 s.h. PROFESSOR WALTON

228. ANATOLE FRANCE.—Analysis of the principal phases of his work and its relation to the French tradition. Reading of his poetry, *Le Crime de Sylvestre Bonnard*, *Thaïs*, *Le Jardin d'Epicure*, *Les Dieux ont Soif*, *Le Lys Rouge*, *L'Île des Pingouins*, parts of *La Vie Littéraire*. 3 s.h. PROFESSOR WALTON

FOR GRADUATES

323, 324. REALISM AND NATURALISM.—Literary doctrines and practices in the generation of 1850-90, with particular reference to the background of scientific thinking. 6 s.h. PROFESSOR JORDAN

325, 326. FRENCH LITERATURE IN THE SIXTEENTH CENTURY.—Main attention is given to Rabelais, Montaigne, Marot, Ronsard, Du Bellay. Principal movements treated are: Humanism, Hellenism, Platonism, Petrarchism, the *Pléiade*. 6 s.h. PROFESSOR WALTON

333, 334. CONTEMPORARY FRENCH LITERATURE.—The twentieth century is examined mainly with reference to the originality of its contribution in the domain of ideas and literary forms. Only the leading figures are read extensively: Rolland, Gide, Proust, Duhamel, Valéry. 6 s.h. PROFESSOR JORDAN

350. NINETEENTH-CENTURY FRENCH CRITICISM.—A survey of critical doctrines and practices from Sainte-Beuve to the end of the century, including Brunetière, Faguet, Lemaître, France, Doumic and others. 3 s.h. PROFESSOR JORDAN

SPANISH

FOR SENIORS AND GRADUATES

230, 231. THE STORY OF THE SPANISH LANGUAGE.—How the sounds, forms, words, and sentence structure have changed from the speech of the Roman conquerors to the language which is spoken today in Spain and Spanish America. 6 s.h. PROFESSOR KENISTON

257. OLD SPANISH LANGUAGE.—The historical development of the language together with illustrative readings. 3 s.h. PROFESSOR DAVIS

258. OLD SPANISH LITERATURE.—The literature of the Middle Ages and Early Renaissance. 3 s.h. PROFESSOR DAVIS

260. ADVANCED COMPOSITION AND SYNTAX.—Study of fundamental difficulties in the language; practice in writing idiomatic Spanish; exercises in free composition. For students who have a satisfactory command of Spanish grammar and fair conversational ability. Prerequisite: Spanish 173-174 or permission. 3 s.h. ASSOCIATE PROFESSOR CASTELLANO

261. NINETEENTH CENTURY NOVEL.—A study of literary and social trends in the last half of the nineteenth century. Readings will be selected from the novels of Valera, Pereda, Galdós, Pardo, Bazán, Blasco Ibáñez, and their contemporaries. 3 s.h. PROFESSOR DAVIS

264. MODERN AND CONTEMPORARY SPANISH THEATER.—A brief review of the modern and contemporary Spanish Theater from the period of Romanticism. Lectures, reading and discussion of the most representative works of Benavente, Martínez Sierra, los hermanos Quintero, etc. 3 s.h.

ASSOCIATE PROFESSOR CASTELLANO

265. GOLDEN AGE LITERATURE: CERVANTES.—The life and thought of Cervantes with special emphasis on his *Quijote*. 3 s.h.

PROFESSOR PREDMORE

266. GOLDEN AGE LITERATURE: THE DRAMA.—Study of the chief Spanish dramatists of the seventeenth century with readings of representative plays of this period. 3 s.h.

ASSOCIATE PROFESSOR CASTELLANO

270. THE SPANISH LANGUAGE IN AMERICA.—Development of the Spanish language from the time of the Discovery to the present. 3 s.h.

PROFESSOR PREDMORE

275. CONTEMPORARY SPANISH LITERATURE.—Essay and Lyric Poetry. A study of the revision of national values and literary expression in the twentieth century with particular reference to the crisis of 1898 and to the enrichment of the Spanish tradition through extra-peninsular influences. 3 s.h.

PROFESSOR PREDMORE

276. CONTEMPORARY SPANISH LITERATURE.—Novel. A study of tradition and innovation in the twentieth century Spanish novel with emphasis on the novels of Unamuno, Baroja, Valle Inclán, and Pérez de Ayala. 3 s.h.

PROFESSOR PREDMORE

285. THE EARLY RENAISSANCE IN SPAIN (1474-1550).—The major aspects studied are: humanism, reformation and counter-reform, the beginnings of the theater, the Italianate poets, the impact of the New World, architecture and the arts. 3 s.h.

PROFESSOR KENISTON

286. THE LATER RENAISSANCE IN SPAIN (1550-1600).—The novel—chivalric, pastoral, picaresque—the emergence of the *comedia*, the ballads, the mystics, lyric poets, literary theory, architecture and the arts. 3 s.h.

PROFESSOR KENISTON

SOCIOLOGY AND ANTHROPOLOGY

PROFESSOR JENSEN, CHAIRMAN—215E SOCIAL SCIENCE BUILDING; PROFESSOR HART, DIRECTOR OF GRADUATE STUDIES—215D SOCIAL SCIENCE BUILDING; PROFESSOR THOMPSON; ASSOCIATE PROFESSORS LABARRE AND SCHETTLER; ASSISTANT PROFESSOR ROY

The Department of Sociology and Anthropology offers graduate work leading to the A.M. and Ph.D. degrees. Before undertaking advanced work in this department, a student must have completed a minimum of twelve semester hours of approved preliminary courses in the field, and twelve additional semester hours in the field or in related work. A student who is deficient in the minimum required work will be asked to take additional undergraduate courses agreed upon in conference with the Director of Graduate Studies.

Candidates for advanced degrees in sociology usually take minor work in psychology, economics, political science, education, history, or religion. Detailed requirements for the minor work, and for majors in other departments who wish to present sociology as minor work, may be obtained from the Director of Graduate Studies.

The courses planned for 1954-55 are 212, 213, 214, 215, 233, 235, 237, 238, 243, 246, 261, 271, 273, 276, 286, 288, 292, 293, 330, 340, 380, 381, 382, 391, 393. Either 91-92, 93 or 94, and 101 is prerequisite for all courses.

ANTHROPOLOGY

212. PRIMITIVE RELIGION.—The ethnography, the social functions and the socio-psychological meanings of religion in primitive societies. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

213. **PERSONALITY AND SOCIETY.**—The sociology and social psychology of human personality, its origins in the primary group, its nature and varieties and its integrations into secondary group institutions. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

214. **PERSONALITY AND CULTURE.**—The influence of culture patterns and social institutions upon character structure, socialization of the individual, and the dynamics of human personality. Comparative anthropological materials will be drawn upon. Prerequisite: course 213. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

(Admission to 213 and 214 only by consultation with the instructor.)

215. **THE AMERICAN INDIAN.**—A comprehensive survey of the Indians of North and South America, including a study of origins and prehistory, archaeology, physical anthropology, languages, material culture, social and political organization, economics and religion, discussed in terms of the "culture area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

217. **THE PEOPLES OF AFRICA, ASIA, AND OCEANIA.**—A comprehensive survey of the non-European peoples of the Old World, covering available pre-history, archaeology, racial affiliations, languages, material culture, social and political organization, economics, and religion, discussed in terms of the "culture area" concept, and illustrated with the ethnography of a characteristic tribe from each area. 3 s.h.

ASSOCIATE PROFESSOR LABARRE

330. **SEMINAR IN ANTHROPOLOGY.**—A seminar for advanced students who wish to pursue individual studies in racial or cultural anthropology. 1 to 3 s.h. *each semester.*

ASSOCIATE PROFESSOR LABARRE

COMMUNITY, RACE AND CULTURE

233. **RURAL SOCIOLOGY.**—The sociology of the land; peasant and folk societies and cultures; patterns of rural settlement like the farm, the plantation, the ranch and others; rural personality types; the changing character of rural life; rural problems. 3 s.h. *Second semester.*

PROFESSOR THOMPSON

235. **URBAN SOCIOLOGY.**—A study of the city and civilization, the newspaper, the social survey, the slum and housing, neighborhoods and natural areas, urban institutions, urban problems, and city planning. 3 s.h.

PROFESSOR THOMPSON

237. **COMMUNITY AND SOCIETY.**—This course seeks to provide a frame of reference for the analysis and ordering of facts pertaining to the diverse cultures of the world, the State, the world community, the Great Society, news, mass behavior, social problems, races and classes. 3 s.h.

PROFESSOR THOMPSON

238. **RACE AND CULTURE.**—A study of the nature of race and of the relationships and problems of race. 3 s.h.

PROFESSOR THOMPSON

340. **SEMINAR.**—Methodological problems involved in the study of race relations, urban and rural life, the South and society generally. 3 s.h. *each semester.*

PROFESSOR THOMPSON

COLLECTIVE BEHAVIOR

243. **SOCIAL ATTITUDES AND COLLECTIVE BEHAVIOR.**—Study of attitudes as products of social interaction; organization of attitudes into personal behavior patterns; expression of social attitudes in social, political and industrial groups; social unrest and the behavior of crowds and mobs; analysis of social movements, strikes, revolutions, and other group organizations. 3 s.h.

ASSOCIATE PROFESSOR SCHETTLER

246. **PUBLIC OPINION AND PROPAGANDA.**—Nature and development of public opinion; relation to attitudes, biases, stereotypes and controversial issues; role of leaders, pressure groups and minority groups; use of radio, press, motion picture and graphic arts; propaganda and censorship; measurements of public opinion. 3 s.h.

ASSOCIATE PROFESSOR SCHETTLER

250. MARRIAGE AND THE FAMILY.—An analysis of contemporary marriage and family experience with emphasis on its functions, problems, resources and values. Not open to students who have received credit for Religion 170. 3 s.h.

PROFESSOR HART

SOCIAL ORGANIZATION AND DISORGANIZATION

261. PROBLEMS IN INDUSTRIAL SOCIOLOGY.—Sociological analysis of human relations problems that confront administrators of industrial institutions and leaders in industrial community life. In this course emphasis falls on the examination of concrete case materials and the appraisal of published research with consideration of possibilities for further development of scientific procedures in the field of industrial sociology. 3 s.h.

ASSISTANT PROFESSOR ROY

271. SOCIAL PATHOLOGY.—A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society; natural disasters, poverty, physical defectiveness, malnutrition, mental deficiency, mental disease, undirected leisure activities and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. (Not open to students who have had Sociology S274.) 3 s.h.

PROFESSOR JENSEN

273. SPECIAL PROBLEMS IN SOCIAL PATHOLOGY.—Research projects in social and personal disorganization, limited to advanced students with the approval of the instructor. 1 to 3 s.h. *each semester*.

PROFESSOR JENSEN

276. CRIMINOLOGY.—A study of the original tendencies of man and the problem of socializing these tendencies; the relation of physical and mental defectiveness and untoward influence in the home and neighborhood to crime; the development of criminological theory and procedure, emphasizing penal and reform methods, and especially modern methods of social treatment and prevention of crime. 3 s.h.

PROFESSOR JENSEN

380. SEMINAR IN APPLIED SOCIOLOGY.—Special research problems in social pathology, child welfare, criminology, and related topics. 1 to 3 s.h. *each semester*.

PROFESSOR JENSEN

SOCIAL THEORY

286. SOCIAL ETHICS.—A study of sociological fundamentals underlying ethics, including the controversy between materialistic and idealistic social thinkers, the nature of personalities and of social organization, the nature of social values, types of social interaction and their effects upon general social values, underlying principles and facts of social change, and the bearings of all these upon certain social problems. 3 s.h.

PROFESSOR HART

288. CONTEMPORARY PROBLEMS IN CULTURAL LAG.—An exploration of such sociological problems as social evolution, cultural lag, conflict, accommodation, leadership, and social reform, in relation to the crisis of civilization precipitated by the development of the atomic bomb and by kindred discoveries and inventions. 3 s.h.

PROFESSOR HART

381. PRINCIPLES OF SOCIOLOGY.—A critical study of sociological theory. The sociological theories of recent writers will be critically examined with a view to laying the foundation for a constructive theory of the social life in modern biology and psychology. Discussions and papers by the class. 3 s.h.

PROFESSOR JENSEN

382. HISTORY OF SOCIOLOGICAL THEORY.—Lectures on the development of social thought from Aristotle to the present; the social philosophies of Plato, Aristotle, St. Augustine, Thomas Aquinas, Machiavelli, Bodin, Hobbes, Locke, Vico, Montesquieu, Rousseau, Condorcet, and the sociological systems of Conte, Spencer, Schäffle, Lilienfeld, Gumplowicz, Ratzenhofer, and Ward will, among others, be considered. A large amount of assigned reading will be required in this course. The student is advised to correlate this course with related courses in economics, history, political science, and philosophy. 3 s.h.

PROFESSOR JENSEN

METHODS OF SOCIAL RESEARCH

292. STATISTICAL TECHNIQUES IN SOCIOLOGY.—Intended for graduate students, and for undergraduates who are ready to undertake original statistical research projects. 3 s.h. (*first semester*). PROFESSOR HART

293. SPECIAL PROBLEMS IN SOCIAL STATISTICS.—Applications of statistical techniques to specific research topics; limited to advanced students with permission of the instructor. 1 to 3 s.h. PROFESSOR HART

391. SEMINAR IN SOCIAL STATISTICS.—Special research problems in social statistics, social ethics, the family or related topics. 1 to 3 s.h. PROFESSOR HART

393. OPERATIONAL SOCIOLOGY.—A seminar for advanced students, presenting an operational philosophy of social science as a basis for research in sociology. Examples of operational procedure will be analyzed. Assigned projects will embody applications of the operational method. Prerequisite: one of the following: Sociology 292 or Economics 237-238, or Education 209, or Mathematics 124, or some other acceptable course in statistics. 3 s.h. PROFESSOR HART

RELATED COURSES IN OTHER DEPARTMENTS

Economics 215, 216, 217; Philosophy 205; Political Science 223, 224; Psychology 206.

ZOOLOGY

PROFESSOR GRAY, CHAIRMAN—218 BIOLOGY BUILDING; PROFESSOR WILBUR, DIRECTOR OF GRADUATE STUDIES—328 BIOLOGY BUILDING; PROFESSOR SCHMIDT-NIELSEN;
ASSOCIATE PROFESSORS BOOKHOUT, HUNTER, AND ROBERTS;
ASSISTANT PROFESSORS BAILEY, HORN, AND NACE

To undertake study toward an advanced degree in zoology a student should have completed an undergraduate major in zoology or its equivalent. This normally amounts to twenty-four or more hours of course work distributed among various fields of zoology, and must include comparative vertebrate anatomy or vertebrate zoology, embryology, and physiology. At least a year of chemistry is required. Physics is recommended. Candidates for the doctorate will be expected to have had not less than two years of chemistry and a year of botany. For some phases of zoology, organic chemistry is essential.

Required work for the A.M. ordinarily includes 18 semester hours of advanced course work in zoology, six semester hours of course work in a minor department, and an acceptable thesis.

Candidates for the Ph.D. degree are expected to be broadly trained zoologists. The program of each candidate is determined by a committee which reviews previous training and sets specific requirements to be met. Normally the program includes one or more graduate courses in each of several fields of zoology; courses in a minor subject; wide reading in science in general and in biology in particular; research; and a dissertation based on original work. A first draft of the thesis must be submitted to the major professor by March 15 of the year in which the degree is to be conferred.

For 1954-55 the courses planned are 204, 222, 238, 252, 271, 276, 278, 303, 307, 343, 351-352, 353-354, 355-356.

FOR SENIORS AND GRADUATES

204. ADVANCED PARASITOLOGY.—Lectures, conferences, readings, and laboratory work dealing with practical and theoretical problems of classification, morphology, and host relations of animal parasites. Prerequisite: Zoology 161. 4 s.h.
ASSOCIATE PROFESSOR HUNTER

222. ENTOMOLOGY.—Anatomy, physiology, embryology, and classification of insects. Prerequisite: one year of zoology. 4 s.h. PROFESSOR GRAY

224. VERTEBRATE ZOOLOGY.—A study of the life histories, adaptations, ecology, and classification of vertebrate animals. Prerequisite: Zoology 53. 4 s.h.
PROFESSOR GRAY

229. ENDOCRINOLOGY.—The structure, physiology, and embryology of the endocrine glands. Lectures, reading assignments, reports, and laboratory work. Prerequisites: Zoology 53, 92. 4 s.h.

238. SYSTEMATIC ZOOLOGY.—The fundamental theory and practice involved in the collection, identification and classification of animals. Prerequisite: Zoology I and 2. 4 s.h.
ASSISTANT PROFESSOR BAILEY

252. COMPARATIVE PHYSIOLOGY.—The physiological mechanisms of animals studied on a comparative basis. Prerequisite: Zoology 151 or equivalent. 4 s.h.
PROFESSOR SCHMIDT-NIELSEN

253. ADVANCED VERTEBRATE MORPHOLOGY.—Lectures, reports and reading assignments in the comparative morphology of the vertebrates, with particular emphasis on theories concerning the interrelationships of vertebrates, and the origin of certain vertebrate structures. Advanced laboratory study in selected groups of vertebrates. Prerequisites: Zoology 53, 92. 4 s.h.
ASSISTANT PROFESSOR HORN

271. CELLULAR PHYSIOLOGY.—The physiological processes of living matter approached through studies of cells. Prerequisites: two years of biology and at least one year of chemistry. 4 s.h.
PROFESSOR WILBUR

274. INVERTEBRATE ZOOLOGY.—A study of structure, functions, and habits of invertebrate animals under normal and experimental conditions. Field trips will be made to study, collect, and classify animals in their natural habitats. Prerequisites: Zoology I and 2. 4 s.h.
ASSOCIATE PROFESSOR BOOKHOUT

276. PROTOZOOLOGY.—The morphology, physiology, taxonomy, and culture of protozoa. Prerequisites: Zoology I and 2. 4 s.h. ASSOCIATE PROFESSOR BOOKHOUT

278. INVERTEBRATE EMBRYOLOGY.—Lectures, readings and laboratory work dealing with rearing, development and life history of invertebrates. Prerequisite: Zoology 92. 4 s.h.
ASSOCIATE PROFESSOR BOOKHOUT

FOR GRADUATES

303. ECOLOGY.—Relation of animals to environment. Lectures, readings, reports, conferences; laboratory and field work. 4 s.h.
PROFESSOR GRAY

307. FOUNDATIONS OF ZOOLOGY.—Lectures, readings, and discussions on the background and training essential for a professional zoologist. 2 s.h.
ALL MEMBERS OF THE GRADUATE STAFF

324. ADVANCED PHYSIOLOGY.—Recent advances in physiology. Lectures, conferences and laboratory work. Prerequisite: Zoology 252 or 271. 4 s.h.
PROFESSORS SCHMIDT-NIELSEN AND WILBUR

328. EXPERIMENTAL EMBRYOLOGY.—Lectures, readings, reports and laboratory work. Prerequisites: Zoology 53, 92, 156, 271, or equivalent. 4 s.h.
ASSISTANT PROFESSOR NACE

343. CYTOLOGY.—The structure of the cell. Lectures, readings, reports and laboratory work. Prerequisites: Zoology 53, 92, 156, or equivalent. 4 s.h.
ASSOCIATE PROFESSOR ROBERTS

351-352. ZOOLOGICAL JOURNAL CLUB.—A weekly meeting of graduate students and Faculty to hear reports and to discuss biological facts, theories, and problems. One hour a week throughout the year. Required of all graduate students who major in zoology. 2 s.h.
ALL MEMBERS OF THE GRADUATE STAFF

353-354. RESEARCH.—Students who have had proper training may carry on research under direction of members of the Staff in the following fields. Hours and credits to be arranged.

(a) EMBRYOLOGY.

ASSISTANT PROFESSOR NACE

(b) PHYSIOLOGY.

PROFESSORS SCHMIDT-NIELSEN AND WILBUR

(c) HISTOLOGY, CYTOLOGY.

ASSOCIATE PROFESSOR ROBERTS

(d) INVERTEBRATE ZOOLOGY, INVERTEBRATE HISTOLOGY AND EMBRYOLOGY. ASSOCIATE PROFESSOR BOOKHOUT

(e) ECOLOGY, ENTOMOLOGY, VERTEBRATE ZOOLOGY. PROFESSOR GRAY

(f) VERTEBRATE MORPHOLOGY AND MORPHOGENESIS.

ASSISTANT PROFESSOR HORN

(g) PARASITOLOGY.

ASSOCIATE PROFESSOR HUNTER

(h) VERTEBRATE ZOOLOGY.

ASSISTANT PROFESSOR BAILEY

355-356. SEMINAR.—One or more seminar courses in particular fields are given by various members of the Staff. These will be in the fields indicated under courses 353-354 above. 2 s.h.

COURSES IN THE MEDICAL SCHOOL OPEN TO GRADUATE STUDENTS

PROFESSORS BEARD, F. BERNHEIM, CONANT, EADIE, EVERETT, HALL, HANDLER, HETHERINGTON, MARKEE, D. T. SMITH, AND TAYLOR; ASSOCIATE PROFESSORS BECKER, M. L. C. BERNHEIM, DUKE, KORKES, PEELE, PENROD, RUNDLES, AND SCHWERT

The facilities of the several Departments of the Medical School listed below are available to qualified graduate students, already admitted to the Graduate School, for independent or supervised research and investigation, whether or not they are working toward advanced degrees.

Graduate students wishing to pursue a major or minor in any of the following departments, or to enroll in any of the courses listed below, should consult or write the appropriate Director of Graduate Studies: Anatomy, Professor J. E. Markee; Microbiology, including Mycology, Parasitology and Hematology, Professor D. T. Smith; Biochemistry and Nutrition, Professor Philip Handler; Physiology and Pharmacology, Professor F. G. Hall.

Because of the special schedules maintained in the Medical School, graduate students should write the Director of Graduate Studies of the department in which they are interested to ascertain the precise dates when courses are offered.

ANATOMY

Completion of training equivalent to that required of an undergraduate major in biology is prerequisite for these courses in human anatomy.

M201. GROSS HUMAN ANATOMY.—A course especially designed for graduate students, comprising a complete dissection of the cadaver. The laboratory work is supplemented by conferences which place emphasis on the biological aspects of the subject. Oct.-Feb. Hours and credits (maximum 8 s.h.) by arrangement. Prerequisite: adequate training in comparative anatomy and embryology.

PROFESSORS MARKEE AND EVERETT; ASSOCIATE PROFESSORS BECKER AND DUKE

M202. MICROSCOPIC ANATOMY.—Conferences and laboratory work on the morphological characteristics of the tissues of the animal body. The work is based upon a study of fresh and prepared material and is approached from the physiological viewpoint. Oct.-Feb. Hours and credits (maximum 3 s.h.) by arrangement. Prerequisite: adequate training in histology or cytology.

PROFESSORS MARKEE, HETHERINGTON, AND EVERETT; ASSOCIATE PROFESSORS BECKER AND DUKE

M203. ANATOMY OF THE NERVOUS SYSTEM.—A study of the gross and microscopic structure of the human central nervous system, special attention being paid to the structural and functional relationships between the various nuclei and fiber tracts. Oct.-Feb. Hours and credits (maximum 4 s.h.) by arrangement. Prerequisite: Anatomy M201.

PROFESSORS MARKEE AND EVERETT; ASSOCIATE PROFESSORS PEELE, BECKER, AND DUKE

M204. NEUROANATOMICAL BASIS OF BEHAVIOR.—A study of the gross and microscopic anatomy of the nervous system with emphasis on the structural and functional relationships between tracts, nuclei, and cortical areas. Insofar as possible the result of deficit in a system or systems will be demonstrated by motion picture aids, and the mechanisms involved will be reviewed and discussed. Restricted to graduate students with the equivalent of a major in psychology. 3 s.h.

PROFESSOR HETHERINGTON

M312. RESEARCH.—Individual investigations in the various fields of anatomy. Credits to be arranged.

PROFESSORS MARKEE, EVERETT, HETHERINGTON;
ASSOCIATE PROFESSORS PEELE, DUKE, AND BECKER

BIOCHEMISTRY AND NUTRITION

The program of graduate studies in biochemistry is designed primarily for Ph.D. candidates who intend to pursue a research career in this field. Candidates for the A.M. degree only are not encouraged to apply for admission and are accepted only under exceptional conditions. Preference is given to students who have completed one year of graduate work in chemistry, physics, or biology at Duke University or at some other approved institution. As preparation for courses in advanced chemistry, the student must have completed college courses in analytical geometry and elementary calculus. He also must have had adequate preparation for the reading examination in French and German, which is required of candidates for the Ph.D. degree.

M241. GENERAL BIOCHEMISTRY AND NUTRITION.—Three lectures, four laboratory periods of three hours each, one two-hour seminar weekly for eighteen weeks. Prerequisites: general chemistry, organic chemistry, physical and analytical chemistry, and at least one year of college biology. Feb.-June. 8 s.h.; without laboratory work, 3 s.h.

PROFESSORS HANDLER AND TAYLOR; ASSOCIATE PROFESSORS
M. L. C. BERNHEIM, SCHWERT, AND KORKES, AND DR. KAMIN

M242. BIOCHEMICAL PREPARATIONS.—Laboratory work with conferences when necessary. This course involves detailed study of the chemistry of enzymes, proteins, fats, carbohydrates and derivatives. Prerequisite: Biochemistry M241 or its equivalent. Hours by arrangement. 2, 3, or 4 s.h.

PROFESSOR HANDLER; ASSOCIATE PROFESSORS M. L. C.
BERNHEIM, KORKES, AND SCHWERT

M341. THEORIES AND METHODS OF PHYSICAL BIOCHEMISTRY.—A lecture and seminar course on basic physical concepts and experimental methods in the study of biological compounds and systems. With demonstrations. Given alternately with M343-344. 2 s.h.

ASSOCIATE PROFESSOR SCHWERT

M343-344. BIOCHEMISTRY OF PROTEINS AND ENZYMES.—A lecture and seminar course devoted to the chemical, physical and biological properties of proteins and enzymes. In the first semester, general aspects of protein chemistry will be considered; in the second semester specific proteins and enzyme systems will be reviewed. Given alternately with M341. 4 s.h.

ASSOCIATE PROFESSOR SCHWERT

M345-346. SEMINAR.—Required of all graduate students majoring in biochemistry, one hour per week. 2 s.h.

PROFESSORS HANDLER AND TAYLOR; ASSOCIATE PROFESSORS
M. L. C. BERNHEIM, SCHWERT, AND KORKES

M347-348. BIOCHEMICAL RESEARCH.—A laboratory course in which the students are introduced to specialized concepts and methods currently employed in biochemical research. This will be accomplished by rotating assignment of the students to the various special laboratories of the department. Prerequisite: Biochemistry M241 or its equivalent. 2, 3, or 4 s.h.

PROFESSORS HANDLER AND TAYLOR; ASSOCIATE PROFESSORS
M. L. C. BERNHEIM, SCHWERT, AND KORKES

M349-350. **INTERMEDIARY METABOLISM.**—A seminar course devoted to a study of the detailed mechanisms of carbohydrate, fat and protein metabolism. Given alternately with Biochemistry M351-352. Prerequisite: Biochemistry M241 or its equivalent. 4 s.h.
PROFESSOR HANDLER

M351. **NUTRITION.**—A seminar course in which the chemical and physiological behavior of essential nutritional factors is considered, as well as the nature of deficiency states. Prerequisite: Biochemistry M241 or its equivalent. Given alternately with Biochemistry M349-350. 2 s.h.
PROFESSOR HANDLER

M354. **BIOCHEMISTRY OF DISEASE.**—A lecture and seminar course in the biochemical aspects of the pathogenesis, diagnosis, and therapy of diseases of metabolism. 2 s.h.
PROFESSOR HANDLER

MICROBIOLOGY

M221. **BACTERIOLOGY AND IMMUNOLOGY.**—This course is devoted primarily to the study of the biological and immunological relationships of microorganisms (bacteria, fungi, Rickettsia, and viruses) in disease. It is not a course in bacteriologic technique. An additional course in technical methods is provided for those who require it. Five lectures, two 1-hour conferences and three laboratory periods of 3 hours each weekly, in fall quarter. Prerequisites: courses in general zoology, general botany, histology and comparative anatomy, general and organic chemistry. 6 s.h.
PROFESSOR D. T. SMITH AND ALL
MEMBERS OF THE GRADUATE STAFF

M322. **IMMUNOCHEMISTRY.**—A seminar dealing with the fundamentals of immunological reactions in general and with the chemistry of antigen-antibody reactions in particular. 2 s.h.

M323. **ADVANCED BACTERIOLOGY AND IMMUNOLOGY.**—This course is intended primarily for graduate students majoring in bacteriology, but it is also available as a minor to other graduate students in related fields, to whom it is recommended by respective supervising committees and with the approval of the Department of Bacteriology. Prerequisites: Bacteriology and Immunology, M221. 8 s.h.
PROFESSOR D. T. SMITH

M324. **RESEARCH SEMINAR ON VIRUSES.**—Limited to advanced students. 2 s.h. per semester.
PROFESSOR BEARD

M325. **MEDICAL MYCOLOGY.**—This course is intended to familiarize the graduate student majoring in mycology with the fungi causing disease in man and animals. The course includes practical laboratory work with materials from patients in Duke Hospital and those sent to the Duke Fungus Registry from outside sources. Prerequisites: A.M. in botany with major in mycology and M221. Course limited to four students each year. 8 s.h.
PROFESSOR CONANT

HEMATOLOGY

M211. Three lectures and three laboratory periods of 3 hours each, weekly, for eleven weeks in the spring quarter. Prerequisites: courses in general zoology, general botany, histology and comparative anatomy. 4 s.h. ASSOCIATE PROFESSOR RUNDLES

MEDICAL PARASITOLOGY

M291. **MEDICAL PARASITOLOGY.**—One lecture and one three-hour laboratory period per week for eleven weeks during the fall quarter. Prerequisites: courses in Zoology 204, general botany, histology and comparative anatomy. 1 s.h.

PHYSIOLOGY AND PHARMACOLOGY

M261-262. **HUMAN PHYSIOLOGY.**—Six lectures and twenty laboratory hours per week. Prerequisites: Anatomy M201 and Biochemistry M241 (or equivalents) and at least one year of college physics. Feb.-June. Credits depending on work taken. (Maximum 8 s.h.)
PROFESSOR HALL AND ALL MEMBERS
OF THE GRADUATE STAFF

M365. RESPIRATION AND AERO-PHYSIOLOGY.—A study of the fundamental respiratory processes in living organisms, and of the special physiological responses and adjustments of the individual during high altitude flight. Lectures, conferences, laboratory. Prerequisites: M261-262 or equivalent. 4 s.h. PROFESSOR HALL

M369. PHARMACOLOGY. MODE OF ACTION OF DRUGS.—Studies and discussions of the pharmacological action of drugs in terms of biochemical and physiological processes. Lectures, conferences, and laboratory. Prerequisites: M261-262 or equivalent. 4 s.h. PROFESSOR F. BERNHEIM

M370. SEMINAR.—A weekly meeting of graduate students and staff in which papers reviewing classical and current physiological literature are reported. Required of all graduate students who are candidates for the A.M. or Ph.D. degree. 2 s.h. PROFESSORS HALL AND BERNHEIM;
ASSOCIATE PROFESSOR PENROD

M372. RESEARCH.—Individual investigations in the various fields of physiology. Credits to be arranged. PROFESSORS HALL AND BERNHEIM;
ASSOCIATE PROFESSOR PENROD

THE DIVINITY SCHOOL

Fall Semester begins September 23, 1954

Spring Semester begins February 2, 1955

General Information



HISTORICAL STATEMENT

THE Indenture of Trust signed on December 11, 1924, by Mr. James B. Duke, which established Duke University, mentioned first among its objects the training of ministers of the Gospel. The Divinity School was, accordingly, the first of the graduate professional schools to be organized. Its work began with the year 1926-27, the formal opening exercises being held on November 9, 1926.

THE PURPOSE OF THE DIVINITY SCHOOL

The primary purpose of the Divinity School is to provide training for individuals planning to enter the Christian ministry. This includes not only prospective ministers in local churches, but also those preparing themselves to be missionaries at home and abroad, Directors of Christian Education, teachers of religion, chaplains, and social workers. Vital to all of these forms of service is a full understanding of the beginnings, content, and history of the Christian faith and its special pertinence for the spiritual needs of the modern world. Studies of a broad and thorough character directed toward such an understanding constitute the center of the curriculum of the Divinity School and are regarded as the basic training for all prospective Christian workers. Specific training in the skills required of local ministers and of leaders in the work of Christian Education are also provided. As funds become available for the purpose and as needs appear, additional training in specialized skills and areas of knowledge will be added to the curriculum.

Though bound by ties of history and obligation to the Methodist Church, the Divinity School is ecumenical in its interests and outlook. Its faculty is limited to no one denomination, but draws upon the resources of them all. Students of the several denominations are admitted on the same basis. The Divinity School conceives its task to be one of broad service to the Church in all of its forms.

THE RELATION OF THE DIVINITY SCHOOL TO DUKE UNIVERSITY

The Divinity School is an integral unit of the University and shares fully in its activities, privileges, and responsibilities. The Sunday services in the University Chapel give Divinity School students an opportunity to hear each year a number of leading ministers of the country.

The University Libraries make easily accessible a rich collection of 1,100,000 volumes. Selected courses in the Graduate School of Arts and Sciences and in the professional schools are open to Divinity School students without payment of additional fees. The general cultural and recreational resources of the University are available to them on the same basis as to other students.

LIBRARY RESOURCES

The Divinity School has its own library containing over sixty-eight thousand volumes. It is rich in complete files of the more important religious journals and periodicals, in source materials, particularly for the study of medieval and American church history, Judaism, missions and the history of religion, and in facsimiles of the more important manuscripts of the New Testament. Among the most treasured possessions of the Library are twenty-one Greek manuscripts of the eleventh to seventeenth centuries. Twelve are Greek New Testament, of which one is a magnificent manuscript of the thirteenth or fourteenth century, containing the entire text of the New Testament; four are liturgical manuscripts containing material valuable for studies in the New Testament and church history.

The combined libraries of the University contain over 1,100,000 volumes. The General Library of the University is connected by a corridor with the Divinity School Building. It contains seven hundred thousand volumes and receives the current issues of several thousand periodicals, more than two hundred of which are in the field of religion. The General Library contains also a catalogue of the library of the University of North Carolina located at Chapel Hill, twelve miles away, and a system of exchange operates between the two libraries, so that books may be secured from that library also within a few hours.

The Henry Harrison Jordan Loan Library was endowed in 1947 by the children of the late Reverend Henry Harrison Jordan, for the purpose of providing ministers in the field with the best of current religious literature. This collection was an outgrowth of the Duke Divinity School Loan Library established in 1944.

COURSES OF STUDY OFFERED BY THE DIVINITY SCHOOL

The Divinity School offers two courses of study. The basic course is that which leads to the degree of Bachelor of Divinity. This is a three-year course and is recommended to all those preparing themselves for the work of the regular pastoral ministry. Students who hold pastoral charges, or other remunerative work requiring any substantial time apart from their studies, may carry only reduced schedules of work, and, in most cases, unless work is taken in the Duke University Summer Session, will spend four years in completion of the requirements for the B.D. degree.

The Divinity School offers also a course of study leading to the degree of Master of Religious Education. This course is designed for individuals who wish to become directors or to take other specialized positions in the work of Christian Education. The course does not provide a general preparation for the work of the regular ministry and cannot serve as a substitute for it. No exchange of credits between the two courses is permitted, nor can departmental courses taken be credited toward more than one degree. Only a limited number of candidates for the Master of Religious Education degree will be accepted annually.

The requirements for each of these degrees are stated on pages 16 through 25 of this catalogue.

COURSES OF STUDY IN RELIGION OFFERED BY THE GRADUATE SCHOOLS OF ARTS AND SCIENCES

Students who desire to pursue work in religion beyond that for the Bachelor of Divinity degree should register in the Graduate School of Arts and Sciences, through which the degrees of Master of Arts and Doctor of Philosophy in Religion may be obtained. This advanced work is administered through the Department of Religion of the Graduate School and is available to qualified persons of all denominations on an equal basis. Study and research may be pursued in three fields: (1) Biblical Studies; (2) Studies in Church History; and (3) Studies in Christian Thought. A list of courses approved by the Graduate Council for work in these fields, together with general requirements for admission to the Graduate School, may be found in the *Bulletin of the Graduate School*. This Bulletin is available on application to the Dean of the Graduate School of Arts and Sciences, Duke University.

A limited number of University Scholarships and Fellowships, among which are four Gurney Harriss Kearns Fellowships of \$1,200 each, may be obtained by exceptionally qualified students. Applications for these must be submitted to the Dean of the Graduate School on University forms not later than March 1 of each year.

Inquiries concerning specific requirements of the Department of Religion in the Graduate School should be addressed to Professor H. Shelton Smith, Director of Graduate Studies in Religion.

FACILITIES FOR ADVANCED STUDY IN THE AMERICAN SCHOOLS OF ORIENTAL RESEARCH

The Divinity School of Duke University is one of the supporting members of the American Schools of Oriental Research. Accordingly, students in the Divinity School have the privilege of attending the American School in Jerusalem or the one in Bagdad without charge for tuition. They may also compete for the financial aids which are

offered annually by the Schools. These consist of four fellowships, the stipends depending upon available funds.

DIVINITY SCHOOL SEMINARS

The Divinity School, under provision of the James A. Gray fund, conducts each year two extension seminars providing two-day study courses for ministers. In 1953-54 seminars were conducted at Myers Park Methodist Church, Charlotte, N. C. and St. Paul Methodist Church, Goldsboro, N. C. Lecturers were Dr. Frederick C. Grant and Dr. Kenneth W. Clark.

SCHOOL FOR APPROVED SUPPLY PASTORS

In cooperation with the Department of In-Service Training of the Board of Education and the Southeastern Jurisdictional Conference of the Methodist Church, the Divinity School conducts a School for Approved Supply Pastors of the Methodist Church. The school for 1954 is scheduled for July 20-August 6.

STUDENT GOVERNMENT ASSOCIATION

Each student of the Divinity School upon enrollment becomes a member of the Student Government Association. Four officers are elected by the student body annually in April to serve for the following year. These officers, the President, Vice-President, Secretary, and Treasurer, along with the Dean of the Divinity School, serve as the Executive Committee, and the committee chairmen constitute the Student Council, which meets in monthly session to review and coordinate the programs of the several committees. It is desired that all students contribute to the corporate life of the School through active participation in the work of the committees. The Association operates on the basis of a unified budget, each student contributing to its support dues in the amount of \$5.00 per year, payable at the time of fall registration; \$2.50 at spring registration for students who enter at that time.

Admission and Requirements for Degrees



Requirements for Admission

THE Divinity School is a fully accredited member of the American Association of Theological Schools, and is one of the ten accredited seminaries of the Methodist Church. Candidates for admission must hold the degree of A.B., or its equivalent, based upon four years of work beyond secondary education, in a college which is approved by one of the regional accrediting bodies, and their college records must be such as to indicate their ability to carry on graduate professional studies. They will be admitted without examination on presentation of an official transcript of college and all other academic credits which they may have secured. Women will be admitted on the same basis as men.

Applications may be rejected where transcripts show a considerable number of low grades even though the applicant may have eventually received a degree based upon a bare "C" average, especially where the applicant has required longer than the normal eight semesters of college work. Papers filed with applications are not returned.

The applications of students from foreign countries will be considered, each on its own merits, the general principle being that a training equivalent to that of a baccalaureate degree from an accredited American college must have been secured.

The Divinity School accepts a few students who desire to transfer from other accredited theological schools, provided they have not accumulated more than 30 semester hours of credit elsewhere. Admission will be on the basis of transcripts of their work and honorable dismissal. However, all transfer students will be expected to meet the full requirements of the Divinity School and should recognize the fact that there may be loss of time in conforming to these requirements. Credits will be formally accepted only after the student has spent one semester in the Duke Divinity School.

In addition to an adequate academic preparation, applicants must satisfy the Faculty as to their Christian character and purpose. A formal application blank may be secured from the office of the Divinity School. This must be filled out and returned by all candidates for admission. Application for admission should be made as soon as

possible after the beginning of the applicant's last semester of college work. Applications received after April 1 cannot be assured of admission or financial aid for the ensuing academic year.

All persons admitted to the Divinity School are required to report to the Student Health Service, Duke Hospital, for physical examination on days and at hours specified at the time of matriculation. They are also required to take certain tests administered by the Bureau of Testing and Guidance.

Persons who do not matriculate at the time for which they were originally admitted are required to secure written approval for later matriculation. A student who withdraws from the Divinity School and desires to return at a later date must file with the Dean a written request for a leave of absence.

The number of applications for admission to the School is considerably larger than the number of vacancies. In view of this fact, applicants are required on notification of admission to signify their acceptance within two weeks, and to pay an admission fee of \$15.00. (Make check payable to Treasurer of Duke University and send to the Office of the Dean of the Divinity School.) This fee is applied to the regular first-term bill if the student matriculates; if he fails to do so, the fee is forfeited.

Under the terms of the Selective Service Act, as it now stands, pre-enrollment for later formal admission may be granted to persons who meet the Divinity School standards and requirements for admission. Applications for pre-enrollment may be addressed to the Office of the Dean. Pre-enrolled students must send transcripts of each year's college work by June 15th of each year in which they are pre-enrolled. Pre-enrollment does not guarantee formal admission, and a person who has been pre-enrolled for any length of time must send a transcript of work by April 1 of the year in which admission is sought for the ensuing academic year. This must be accompanied by a letter from the college dean or other approved reference certifying to good character and conduct. The admission fee of \$15.00 is due within two weeks of receipt of notice of formal admission.

ADMISSION ON PROBATION

1. Applicants for admission who are graduates of non-accredited colleges will be considered on their merits, but only those who give evidence of special promise will be admitted. Specifically, such applicants must show that they have attained a superior average (approximately "B") for a four-year college course.

Admission of such persons will, in every case, be *on probation*.

2. Applicants for admission who are graduates of accredited colleges but whose college transcripts do not fully meet Divinity School

standards may be admitted *on probation* if their recommendations justify consideration.

Probation means:

a. Students who, during the first year of Divinity School work (thirty semester hours), maintain a consistently low average, including one or more failures, will be required to withdraw from the school.

b. Students admitted on probation may carry only limited schedules of work, the amount to be determined by the Dean.

c. In the case of a student admitted on probation, no credit will be granted for any course in which, during the first year's work (thirty semester hours), a grade of less than "C" (see catalogue section on "grading system") is recorded, unless the student's entire average in the year during which a "D" grade is received is "C" or better.

d. When the student has been admitted on probation, and is subsequently found to be deficient in the essential requisites of any given area of the "Pre-Seminary Curriculum" (see next section of catalogue), the Divinity School Faculty reserves the right to direct that the student make up such deficiencies by additional courses of study taken in other schools of Duke University in order to qualify for either the B.D. or M.R.E. degree, but without credit for such courses toward those degrees.

PRE-SEMINARY CURRICULUM

The Divinity School, in substantial agreement with the standards of the American Association of Theological Schools, recommends that prospective candidates for admission keep in mind the desirability of including the following in their undergraduate curriculum:

It is suggested that a student should acquire a total of 90 semester hours or complete approximately three-fourths of his college work in the areas listed below. No work done towards a first college degree may be used towards a Divinity School degree.

<i>Basal Fields</i>	<i>Semester</i>	<i>Sem. Hours</i>
English	6	12-16
Literature, composition and speech		
Philosophy	3	6-12
At least two of the following:		
Introduction to philosophy, history of philosophy, ethics, logic		
Bible or Religion	2	4-6
History	3	6-12
Psychology	1	2-3
A foreign language	4	12-16
Greek, Latin, and German are especially recommended.		
Natural sciences	2	4-6
Physical or biological		
Social sciences	2	4-6

At least two of the following:

Economics, sociology, government or political science, social psychology, education.

Concentration of work, or "majoring," is a common practice in colleges. For such concentration or major, a constructive sequence based upon any one, two, or three of the above fields of study would lead up naturally to a theological course.

Of the various possible areas of concentration, where areas of concentration are required, a major in English, philosophy, or history is regarded to be the most desirable.

Requirements for the Degree of Bachelor of Divinity

The requirements for graduation stated in this catalogue apply to all students entering the Divinity School as of June 1, 1954. Students who entered prior to that time may graduate under the new plan or under the curriculum which was in force at the time of their original entrance.

The requirements for the degree of Bachelor of Divinity fall into six categories as follows:

I. Required Courses, to be taken by all candidates for the degree.

11. Introduction to the Old Testament I	3 s.h.
12. Introduction to the Old Testament II	3 s.h.
18. Early Christian Life and Literature	4 s.h.
19. Introduction to New Testament Theology	3 s.h.
13. History of the Church through the Protestant Reformation	4 s.h.
20. Introduction to Christian Theology	4 s.h.
29-30. Sermon Construction—Theory and Practice	4 s.h.
17. Effective Speaking	2 s.h.

II. Limited-Elective Courses.

These may be used also as free electives after the limited-elective requirements have been met.

1. Two of the following three courses required:

22. The Philosophy of Christian Education	3 s.h.
31. Introduction to Philosophy of Religion	3 s.h.
27. Christian Ethics I	3 s.h.

2. Two of the following three courses required:

28. Movements in American Religious Thought	3 s.h.
14. History of the Modern Church	2 s.h.
21. Introduction to the History of Christian Doctrine	2 s.h.

3. Three of the following four courses required (Students will note special requirements of each Vocational Group):

23. Church Administration I	2 s.h.
24. Philosophy of Christian Missions	2 s.h.
25. Educational Theory and Practice in the Church	2 s.h.
26. Introduction to Pastoral Care	2 s.h.

III. Vocational Groups.

Each student, not later than the end of the middle year, will choose one of the five Vocational Groups listed on Page 21 and will meet the vocational requirements of the group chosen.

IV. Senior Seminars.

Each student will elect one of the Senior Seminars listed on Page 35.

V. Free Electives.

The student will choose a sufficient number of courses to make up the total

of 90 semester hours required for graduation. Language courses count as free electives.

- VI. English Bible. Demonstration of a detailed knowledge of the contents of the narrative portions of the English Bible. Examinations for this purpose in Old and New Testament are given each spring. (See Calendar for exact dates.)

Students who show deficiencies in English will be required to take special training in addition to meeting the other requirements for the degree. A degree may be withheld on the grounds of English deficiency only.

By special permission a student who has begun his work in the Divinity School as a candidate for the B.D. degree may be given credit for not more than 30 semester hours of work taken in another seminary on the approved list of the American Association of Theological Schools. Except in unusual cases, request for such credits must be approved prior to the beginning of work at the other institution. In every such case, however, the final 15 hours of class credit presented for graduation must be done at Duke and must include satisfactory completion of one of the Senior Seminars. No such student will be relieved of any of the requirements for graduation specified in the catalogue of the Divinity School.

Unless all the work offered for the B.D. degree is completed within a period of nine years from the date of beginning, the student will be required to make formal application for re-admission and re-evaluation of his credits in the light of the then-existing curriculum of the Divinity School. Except in unusual cases, work of a fragmentary character taken over a long period of years, or work taken many years before a student is admitted to the Divinity School, will not be accepted for credit toward the B.D. degree.

Not over 30 semester hours of Summer Session work may be credited toward the degree of Bachelor of Divinity.

In view of the fact that enrollment must be limited, persons who have already received the B.D. degree from Duke or elsewhere will not be admitted to the Divinity School except as special students in the Summer Session.

ADMINISTERING THE CURRICULUM

For the administration of the curriculum the following regulations have been adopted:

Full-time students will take the required courses and limited-electives as specified for the respective semesters, being limited to the amount of free-elective work indicated in each term. The only exceptions are as specified in the provision for languages.

Since the four-day-a-week schedule and the free week-ends have been planned with special reference to the needs of students holding pastoral charges, such students are permitted, but not required, to carry the total of hours of the required work for the first four semesters,

but free-electives may not be taken until all the required work has been scheduled. The amount of work allowed in the last two semesters will be governed by the same principle. Such students may not carry more than the required work or its equivalent without special permission of the Dean. A student who does not do creditable work will be required to reduce his schedule. The schedules of all students are subject to the approval of the Dean.

The status of "special student" may not be granted simply to permit avoidance of the schedule of required courses. Every request for this classification will be carefully investigated and approval voted in each case by the Curriculum Committee in the cases of students already admitted to the Divinity School, and by the Admissions Committee in the case of applicants for admission as "special students."

A fee of \$10.00 is charged for auditing any course except where a student is already paying regular University fees. Permission to audit requires the approval of the Dean and the instructor concerned.

Students working under or assisted by the Duke Endowment, or by Divinity School funds are required to take one of the Field Work seminars. This work will be taken in the first semester of the first year.

For a student taking both Greek and Hebrew, the Greek may be continued in the second year by postponing one or both of the required courses in Old and New Testament. In such cases, the Hebrew will be the free elective in that year.

A part-time student who desires to begin the study of Greek in the first year may postpone the required course in Old or New Testament.

Suitable entry will be made on the permanent record of any student who is granted permission to deviate from the requirements in the matter of language.

It is the responsibility of each student to see that he meets all requirements for graduation, and to take his courses in proper sequence. He is also responsible for seeing that any special permission granted him to deviate from the normal program is properly recorded in his personal file. Members of the Faculty have no authority to grant deviations unless these are stated in a letter from the instructor in question to the Dean and approved by him; these to be added to the student's permanent record.

GRADING SYSTEM

The grading system of the Divinity School employs the letters A, B, C, D, and F, which have been defined as follows: A = Excellent; B = Good; C = Acceptable; D = Poor; F = Failure; WP = Withdrew Passing; WF = Withdrew Failing; and Inc. = Incomplete. (See below.) No percentage equivalents are stated. A student is expected to maintain an average of C.

The Faculty has voted that in the average course of considerable size, especially required courses, the total of A and B grades should not run above $33\frac{1}{3}\%$. In all courses where the instructor considers attendance a necessary part of the work of the course, a student may not receive a grade of over C if his absences total 12% of the regular class periods, and if the absences total 24% of the class periods he may not receive credit for the course.

Grades of Incomplete received at the end of the fall semester must be removed by the completion of the work of the course not later than March 15. Grades of Incomplete received at the end of the spring semester must be removed by October 1. If the work of the course is not completed by these dates, the grades shall be recorded as "F."

No student shall be permitted to drop a course after the expiration of one-third of the period of instruction of the course without incurring failure, except for causes adjudged by the Dean to be beyond the student's control.

Requirements for the Degree of Master of Religious Education

The course of study leading to this degree is designed for individuals desiring to engage in various forms of Christian Education.

Candidates for this degree must hold the degree of A.B. (or its equivalent), based upon four years of work beyond secondary education, in a college which is approved by one of the regional accrediting bodies, and with academic and personal records which afford promise of competence in this area of service. The course of study will be especially useful for individuals who have had one or more years of experience in Christian Education and desire further training. Candidates for this degree will be limited in number, and individuals interested are urged to apply for admission well in advance of the opening of the academic year. All work offered for this degree, whether in the regular year or in summer sessions, must be completed within a period of six years from the date of beginning.

PREREQUISITES

The following prerequisite studies must have been taken by the candidate prior to his admission to the Divinity School or must be secured, without credit toward the M.R.E. degree, after being admitted:

General Psychology	3 s.h.
Sociology	3 s.h.
Education	3 s.h.

GENERAL REQUIREMENTS

Sixty semester hours of graduate-professional work are required for graduation. Not more than twelve semester hours of this work may be taken in approved summer sessions, and not more than eighteen semester hours outside of the Divinity School.

No credits are allowed for undergraduate courses. However, in approving plans of study leading to this degree, consideration will be given to earlier work taken in the fields of Biblical studies and Christian Education provided such courses were taken in the Junior and Senior years in accredited four-year colleges. Also where candidates for the degree have been engaged professionally as Directors of Christian Education for not less than twelve months prior to entering the Divinity School the amount of Field Work may, upon recommendation of the Director of the M.R.E. program and the approval of the Dean, be reduced to not less than six hours of Project or Directed Field Work during the period required for completing requirements for the degree.

A student who secures credit for 15 semester hours each semester will be in line for graduation at the end of two academic years. The amount of work allowed in each semester may not exceed that permitted in the B.D. curriculum.

COURSE REQUIREMENTS

(Not to include any courses numbered above 199, except in Biblical Studies.)

Not less than eight semester hours of Divinity School work in Biblical Studies (including both Old and New Testaments) for all M.R.E. candidates, and up to fourteen semester hours of such work for candidates adjudged to be insufficiently prepared in Biblical Studies.

Not less than nine nor more than fifteen semester hours in the field of Christian Education, to be distributed as follows: not less than six nor more than twelve semester hours in courses in the practical aspects of Christian Education, and not less than three in the psychological and philosophical aspects of Christian Education.

Not less than four nor more than seven semester hours, taken in two fields, chosen from the offerings in Christian Theology, Christian Ethics, and American Religious Thought.

Not less than four nor more than seven semester hours, taken in two fields, chosen from the offerings in Church History, Historical Theology, and Philosophy of Religion.

Not less than four nor more than five semester hours, taken in two fields, chosen from the offerings in Missions, Church Administration, and Pastoral Care.

Not less than two nor more than three semester hours, taken in one field, chosen from the offerings in Speech, Public Worship, and Church Music.

Project or Directed Field Work: Not less than six nor more than twelve semester hours.

Free electives in sufficient amount to complete sixty hours for graduation will be taken, if necessary.

Senior Seminars: The Senior Seminars of the B.D. curriculum are open to M.R.E. candidates only in the second year, by special permission of the Dean.

Conduct and Ministerial Acceptability

All students are admitted subject to the rules of the University and of the Divinity School, and continuance in the School is conditioned upon the observance of such rules.

The University expects of its students loyal and hearty cooperation in maintaining high standards of conduct as well as of scholarship. The University, therefore, reserves the right, and matriculation by the student is a concession of this right, to compel the withdrawal of any student whose conduct at any time is not satisfactory to the University, even though no specific charge is made against the student.

Divinity School students whose progress and development show that they are not suited to the work of the ministry will not be permitted to continue in the School.

Courses of Instruction*



REQUIRED courses, Limited-Electives, and Senior Seminars are numbered from 11 to 99. Elective courses carrying credit in the Divinity School only are numbered from 101 to 199. Courses approved for credit in both the Divinity School and the Graduate School of Arts and Sciences are numbered above 200. Lists of courses to be offered in any semester will be available at the time of each registration.

I. Biblical Studies

OLD TESTAMENT

11. INTRODUCTION TO THE OLD TESTAMENT I.—The origin, literary forms, and contents of the books of the Old Testament in their geographical and historical setting to the Exile. 3 s.h. MR. STINESPRING

12. INTRODUCTION TO THE OLD TESTAMENT II.—The Post-Exilic period with special reference to Psalms, wisdom literature, and the problem of theodicy. 3 s.h. (2 s.h. until Spring Semester of 1955-56) MR. BROWNLEE

101. POST-EXILIC PROPHECY.—A study of the Post-Exilic prophets from Ezekiel to Daniel, with special reference to Messianic prophecy. 3 s.h. MR. BROWNLEE

196. THE BIBLE AND RECENT DISCOVERIES.—A survey of the contribution of the cultural setting of the Bible as an aid to its understanding. Illustrated with archaeological slides. 3 s.h. MR. BROWNLEE

197. CULTURAL HISTORY OF PALESTINE.—A study of significant contributions to civilization made in ancient, medieval, and modern Palestine with special reference to the three religions, Judaism, Christianity, and Islam. 3 s.h. MR. STINESPRING

201-202. FIRST HEBREW.—The principles and structure of the Hebrew language with translation of selected Old Testament narratives. 6 s.h. MR. STINESPRING

207-208. SECOND HEBREW.—Samuel or Kings the first semester and Isaiah the second. 6 s.h. MR. CHAMBERLAIN

301. THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in Post-Exilic Judaism. Prerequisite: O.T. 11. 3 s.h. MR. BROWNLEE

304. ARAMAIC.—A study of the Aramaic portions of the Old Testament, and selected passages from the Targums, Midrashes, and Talmuds. 3 s.h. MR. STINESPRING

* On recommendation of the Dean, courses offered in the Graduate School of Arts and Sciences other than those approved for credit in the Divinity School may be approved for credit in individual cases, provided no equivalent course is offered in the Divinity School; each case to be decided on its merits.

305. **THIRD HEBREW.**—A study of late Hebrew prose, with readings from Chronicles, Ecclesiastes, and the Mishnah. 3 s.h. MR. STINESPRING

306. **ADVANCED HEBREW.**—A course on the Dead Sea Scrolls. 3 s.h. MR. BROWNLEE

307. **SYRIAC.**—A study of the script and grammar, with readings from the Syriac New Testament and other early Christian documents. Some knowledge of Hebrew and Aramaic prerequisite. 3 s.h. MR. STINESPRING

309. **HISTORY OF THE ANCIENT NEAR EAST.**—A specialized study of the civilizations of Egypt, Palestine, Syria, and Mesopotamia in the light of Biblical archaeology. 3 s.h. MR. STINESPRING

310. **OLD TESTAMENT PROPHECY.**—The prophetic movement in Israel with special emphasis on the prophets of the eighth century B.C. Prerequisite: O.T. 11. 3 s.h. MR. STINESPRING

See also Pr. 183.—**MATERIALS OF PREACHING—BIBLICAL.**

***HISTORY OF ART 215. RELIGIOUS ART OF THE ANCIENT NEAR EAST.**—The development of art, particularly architecture and sculpture, as the material expression of religious ideas in Egypt, Mesopotamia, and in part Syria and Palestine to the Persian conquest. 3 s.h. MR. MARKMAN

***HISTORY OF ART 216. RELIGIOUS ART OF THE CLASSICAL WORLD.**—The religious art, particularly architecture and sculpture, of Greece and Rome with special emphasis on the monuments in the Near East. 3 s.h. MR. MARKMAN

NEW TESTAMENT

18. **EARLY CHRISTIAN LIFE AND LITERATURE.**—A basic study of the civilization in which Christianity began; the origin and development of the Christian Church and its literature through the second century. 4 s.h. MR. CLARK
(MR. DAVIES and MR. CHAMBERLAIN in 1954-55)

19. **INTRODUCTION TO NEW TESTAMENT THEOLOGY.**—A constructive analysis and exposition of the positive doctrinal content of the New Testament. Prerequisite: N.T. 18. 3 s.h. MR. DAVIES

103-104. **HELLENISTIC GREEK.**—Designed for beginners to enable them to read the Greek New Testament. 6 s.h. MR. EDWARDS

105. **LIFE OF PAUL.**—A study of Paul's life on the basis of Acts and the letters of Paul, emphasizing the permanent values in Paul's work and his contribution to the world. 3 s.h. MR. MYERS

109. **HISTORY OF THE ENGLISH BIBLE.**—A general study of the history of the English version with comparison and evaluation of the numerous contemporary translations. This development will be illustrated from the Divinity School Bible collection, with access to and examination of the original editions. 3 s.h. MR. CHAMBERLAIN

116. **LIVING ISSUES OF NEW TESTAMENT THEOLOGY.**—2 s.h. MR. DAVIES

217. **THE NEW TESTAMENT IN GREEK.**—Extensive reading of the Greek text of the New Testament, with special emphasis upon its interpretation. Prerequisite: six semester hours' study of the Greek language. 3 s.h. MR. CHAMBERLAIN

218. **GALATIANS AND I CORINTHIANS.**—A detailed study of two of Paul's major epistles, based on the Greek text. Prerequisite: six semester hours' study of the Greek language. Alternate priority. 3 s.h. MR. DAVIES

220. **I PETER AND THE GOSPEL OF JOHN.**—A detailed study of two of the non-Pauline writings of the New Testament. The course will be based on the Greek text. Prerequisite: six semester hours' study of the Greek language. Alternate priority. 3 s.h. MR. DAVIES

* Course offered in the Graduate School of Arts and Sciences which is credited toward the degree of Bachelor of Divinity.

311. THE LIFE AND TEACHINGS OF JESUS.—A study of the events and sayings of the historical Jesus, in the light of His mission. 3 s.h. MR. CHAMBERLAIN

312. ADVANCED NEW TESTAMENT THEOLOGY.—An examination of the central aspects of New Testament Theology. Prerequisite: N.T. 19. 3 s.h. MR. DAVIES

313. APOSTOLIC FATHERS.—A study of the Christian development from Clement of Rome to Polycarp (90-155 A.D.), with readings in the Greek text. 3 s.h. MR. CLARK

314. PATRISTIC THOUGHT.—A study of the development of early Christian doctrine to the period of Irenaeus. Prerequisite: N.T. 19. 3 s.h. MR. DAVIES

316. HELLENISTIC RELIGIONS.—A study of the Gentile religions in the Roman Empire, at the beginning of the Christian era. Prerequisite: N.T. 18. 3 s.h. MR. CLARK

317. THE SYNOPTIC GOSPELS.—A detailed study of their characteristics and contents, based upon the Greek text, with attention to their respective sources and to the development of synoptic criticism. Prerequisite: N.T. 18. 3 s.h. MR. CLARK

318. TEXTUAL CRITICISM OF THE NEW TESTAMENT.—A study of the scientific recovery of the Greek text on which modern versions are based; manuscript discoveries; principles of textual criticism; practice in collating original manuscripts in the Duke collection. 3 s.h. MR. CLARK

319. JUDAISM AND EARLY CHRISTIANITY.—3 s.h. MR. DAVIES

See also Pr. 183. MATERIALS OF PREACHING—BIBLICAL.

*GREEK 257.—The social and cultural history of the Hellenistic world from Alexander to Augustus. 3 s.h. MR. ROGERS

*LATIN 258.—The social and cultural history of the Graeco-Roman world. 3 s.h. MR. ROGERS

II. Historical Studies

HISTORY OF RELIGION AND MISSIONS

24. PHILOSOPHY OF CHRISTIAN MISSIONS.—A study of theological foundations, guiding principles, and contemporary problems of the World Christian Community. 2 s.h. MR. LACY

108. COMPARATIVE RELIGION I.—The ideas of God, sin, and salvation in the religions of the world. Prerequisite: H.R. 159. 3 s.h. MR. FOSTER

110. COMPARATIVE RELIGION II.—Ideas of the future life and ethical and social ideas in the religions of the world. Prerequisite: H.R. 15. 3 s.h. MR. FOSTER

126. MISSIONARY EDUCATION IN THE CHURCH.—Practical programs for Church School, audio-visual aids, preaching, stewardship, and special projects. 2 s.h. MR. LACY

133. HISTORY OF CHRISTIAN MISSIONS.—A survey of the spread of Christianity from the late 18th century to the present day. 2 s.h. MR. LACY

135. AREA STUDIES IN MISSIONS.—Studies of the cultural setting and current programs and policies of the Church in the following areas: a. Latin America, b. India and Pakistan, c. Africa, d. Southeast Asia, e. Japan-Korea-Philippines, f. Moslem Lands, or g. United States Home Missions. (The area of study to be determined by student interest in consultation with the instructor.) 2 s.h. MR. LACY

159. (Formerly 15.) LIVING RELIGIONS OF THE WORLD.—A survey of the religious systems of India, China, and Japan, followed by a study of Judaism, Mohammedanism, and Christianity, the object being to trace the historical development of each religion. 3 s.h. MR. FOSTER

* Course offered in the Graduate School of Arts and Sciences which is credited toward the degree of Bachelor of Divinity.

CHURCH HISTORY

13. HISTORY OF THE CHURCH THROUGH THE PROTESTANT REFORMATION.—A survey through the sixteenth century in terms of spiritual genius, organizational development, great literature, and representative movements. 4 s.h.

MR. PETRY

14. HISTORY OF THE MODERN CHURCH.—A survey of the main currents in post-reformation and modern church history. 2 s.h.

MR. SCHAFER

136. PRE-REFORMATION PREACHING.—Sermons, handbooks, and other historical sources studied in relation to Biblical preaching and the liturgical church, the problem of popular ministry and the issues of Christian reform. Prerequisite: C.H. 13. 2 s.h.

MR. PETRY

137. RELIGIOUS LEADERS IN CHRISTIAN HISTORY.—Representative leaders in the early and medieval church studied in relation to contemporary churchmanship. Prerequisite: C.H. 13. 2 s.h.

MR. PETRY

138. GREAT BOOKS IN CHRISTIAN HISTORY.—An intensive study of Augustine's *Confessions*, Thomas à Kempis' *Imitation of Christ*, Erasmus's *Complaint of Peace*, Luther's *Christian Liberty*, Calvin's *Instruction in Faith*, and Andrewes' *Private Devotions*. 3 s.h.

MR. PETRY

139. METHODISM.—A study of Methodist societies in England and the developing church in America as they gave rise to such historic issues as polity, education division, and reunion. Prerequisite: C.H. 13. 2 s.h.

MR. PETRY

330. THE CHURCH IN EUROPE SINCE 1800.—Emphasis is placed on the relation of the church to the social, economic, and political life of Modern Europe. Particular attention is given to Papal pronouncements on social issues, the relationship of Eastern to Western institutions, and ecclesiastical historiography as it involves source editions, periodicals, and ecumenical literature. 3 s.h.

MR. PETRY

331. THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian church prior to the Protestant Reformation. Prerequisite: C.H. 13. 3 s.h.

MR. PETRY

332. THE MEDIEVAL CHURCH.—Outstanding characteristics of the medieval church, emphasizing theory, polity, institutions, sacraments, and worship. Prerequisite: C.H. 13. 3 s.h.

MR. PETRY

334. CHURCH REFORMERS AND CHRISTIAN UNITY.—The work of such reformers as Marsilius of Padua, William of Ockham, Jean Gerson, Pierre d'Ailly and Nicholas of Cusa in relation to ecclesiastical schism and the search for Christian unity through representative councils. Prerequisite: C.H. 13. 3 s.h.

MR. PETRY

336. HISTORY OF CHRISTIAN RENUNCIATION IN THE MIDDLE AGES.—A study of the renunciatory ideal and of spiritual practices with special reference to Benedictines, Franciscans, Lowland mystics, and leading seculars. Prerequisite: C.H. 13. 3 s.h.

MR. PETRY

HISTORICAL THEOLOGY

21. INTRODUCTION TO THE HISTORY OF CHRISTIAN DOCTRINE.—Formative periods of doctrine and controversy illustrating the nature and content of historical theology. 2 s.h.

MR. SCHAFER

120. THE CREEDS OF CHRISTENDOM.—A historical and interpretative study of great Christian creeds and confessions. Prerequisite: C.T. 20. 3 s.h.

MR. SCHAFER

129. SEMINAR IN HISTORICAL THEOLOGY.—Selected problems in the history of Christian theology. Prerequisite: H.T. 21. 2 s.h.

MR. SCHAFER

198. THE HERITAGE OF THE REFORMATION.—The doctrine and practice of the Reformers studied for their contribution to the life and thought of the modern church. 3 s.h.

MR. SCHAFER

323. HISTORY OF CHRISTIAN THOUGHT I.—A historical study of theology in the ancient and medieval church. Prerequisite: permission of instructor. 3 s.h.
MR. SCHAFER

324. HISTORY OF CHRISTIAN THOUGHT II.—A historical study of theology from the Reformation. Prerequisite: permission of instructor. 3 s.h. MR. SCHAFER

AMERICAN RELIGIOUS THOUGHT

28. MOVEMENTS IN AMERICAN RELIGIOUS THOUGHT.—Beginning with the English Reformation, this course introduces the leading types of Protestantism transplanted to or developed within colonial America, primary emphasis being placed upon the dominant modes of Christian thought. 3 s.h. MR. SMITH

199. THE AMERICAN SOCIAL GOSPEL.—A study of Protestant social thought and action in America since 1865. 3 s.h. MR. SMITH

395. RELIGIOUS THOUGHT IN COLONIAL AMERICA.—Consideration of the principal types of Protestant thought in colonial culture. 3 s.h. MR. SMITH

396. AMERICAN RELIGIOUS THOUGHT IN THE NINETEENTH CENTURY.—Comparative exposition of Orthodoxy and Liberalism. 3 s.h. MR. SMITH

397. CURRENT AMERICAN THEOLOGY.—Critical appraisal of conflicting tendencies in American theological thought. 3 s.h. MR. SMITH

398. MODERN AMERICAN CHRISTOLOGY.—An analysis of the historical development of modern American conceptions of the person and work of Christ. 3 s.h. MR. SMITH

495. SEMINAR: JONATHAN EDWARDS AND JOHN WESLEY.—A comparative study of the major theological works of Edwards and Wesley. 2 s.h. MR. SMITH

498. SEMINAR: THEOLOGY OF PAUL TILLICH.—An examination of Tillich's philosophical theology. MR. SMITH

III. Theological Studies

PHILOSOPHY OF RELIGION

31. (Formerly 119.) INTRODUCTION TO PHILOSOPHY OF RELIGION. 3 s.h. MR. FOSTER

121. PHILOSOPHY OF CONTEMPORARY THEISM.—A general course: the various forms of contemporary theism will be studied and evaluated. 2 s.h. MR. FOSTER

Additional courses in Philosophy of Religion are being organized.

CHRISTIAN THEOLOGY

20. INTRODUCTION TO CHRISTIAN THEOLOGY.—Contemporary theological tendencies, method and theory of knowledge, and introductory interpretation of the principal tenets of the Christian faith. 4 s.h. MR. CUSHMAN

107. THE PERSON AND WORK OF CHRIST.—An intensive examination of classical types of Christological and soteriological formulation in the history of Christian reflection, assessment and constructive position. Prerequisite: C.T. 20. 2 s.h. MR. CUSHMAN

224. CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory. 3 s.h. MR. CUSHMAN

321. PLATONISM AND CHRISTIANITY.—An analysis of Plato's religious philosophy and a survey of its continuing influence in Hellenistic and Christian thought. Prerequisite: permission of instructor. 3 s.h. MR. CUSHMAN

322. THEOLOGY AND PHILOSOPHY IN THE NINETEENTH CENTURY.—Protestant thought from Schleiermacher to Troeltsch together with representative theologians of Britain. 3 s.h. MR. CUSHMAN

325. PHILOSOPHICAL THEOLOGY I.—Main problems in the history of philosophical theology. Prerequisite: Permission of instructor. 3 s.h. MR. CUSHMAN

326. PHILOSOPHICAL THEOLOGY II.—Historical and constructive approach to the problem of faith and reason. Prerequisite: C.T. 325. 3 s.h. MR. CUSHMAN

328. SEMINAR IN TWENTIETH-CENTURY CONTINENTAL AND BRITISH THEOLOGY.—Critical examination of the thought of Barth, Brunner, Berdyaev, Maritain, F. R. Tennant, and William Temple. 3 s.h. MR. CUSHMAN

See also NEW TESTAMENT 312.—ADVANCED NEW TESTAMENT THEOLOGY.

CHRISTIAN ETHICS

27. CHRISTIAN ETHICS I.—The central assumptions and principles of the Christian conception of the good life. 3 s.h. MR. BEACH

114 CHRISTIAN ETHICS II.—A consideration of special problems involved in the application of Christian ethics in modern society. Prerequisite: C.E. 27. 2 s.h. MR. BEACH

190. THE CHRISTIAN CRITIQUE OF COMMUNISM.—Analysis of and alternatives to the dynamic secular ideology from a religious standpoint. 3 s.h. MR. LACY

192. CHRISTIANITY AND INTERNATIONAL RELATIONS.—An application of Christian Ethics to world problems. 3 s.h. MR. LACY

194. INTRODUCTION TO CHRISTIAN SOCIAL ETHICS.—Christian norms for social policy and their application to the domestic, economic, political, and racial patterns of modern culture. 3 s.h. MR. LACY

391. HISTORICAL TYPES OF CHRISTIAN ETHICS I.—A critical study of representative statements of Christian ethical theory, through the early Reformation. Prerequisite: C.E. 27 or its equivalent. 3 s.h. MR. BEACH

392. HISTORICAL TYPES OF CHRISTIAN ETHICS II.—A continuation of C.E. 391, from the Reformation through current Christian ethical theory. Prerequisite: C.E. 391. 3 s.h. MR. BEACH

393. THE CHRISTIAN INTERPRETATION OF HISTORY.—A comparative examination of the chief secular and Christian theories of history current in Western thought. For advanced students. Prerequisite: C.E. 27. 3 s.h. MR. BEACH

394. CHRISTIANITY AND THE STATE.—The relation of the Christian theory of the State to political problems with special consideration of the religious assumptions underlying democratic theory and practice, and of the relationship of church to state. Prerequisite: C.E. 27. 3 s.h. MR. BEACH

IV. Practical Studies

CHURCH ADMINISTRATION

23. CHURCH ADMINISTRATION I.—An introduction to the administrative and supervisory procedure essential in the total work of the church. 2 s.h. MR. WALTON

142. FIELD WORK I—GENERAL.—A course designed to help with personal and parish problems, and the techniques of successful service. 1 s.h. (Note: All students working under or assisted by the Duke Endowment or by Divinity School funds are required to take this course, or 144, Field Work II, or 145, Field Work III.) MR. WALTON

144. **FIELD WORK II—RURAL.**—This course is designed to prepare students for work in rural churches. It emphasizes the training values in field work. 1 s.h.
Mr. WALTON

145. **FIELD WORK III—URBAN.**—This course is designed to prepare students for work in urban churches. It is planned to help the student fit into the urban situation and to gain the most from his field work. 1 s.h.
Mr. FISHER

146. **CHURCH ADMINISTRATION II.**—This course considers the principles of program planning, policy development, and leadership enlistment and training in the church. 3 s.h.
Mr. WALTON

147. **THE URBAN COMMUNITY.**—The urban environment viewed in relation to the people, institutions, organizational structure and constitutive forces giving rise to urbanism as a way of life. 2 s.h.
Mr. REGEN

148. **CHURCH FINANCE.**—A seminar to consider the principles of budget making, stewardship instruction, and every member enlistment in church support. 2 s.h.
Mr. WALTON

149. **PARISH AND COMMUNITY RESEARCH AND ANALYSIS.**—A seminar to consider the techniques of community surveys, research, and analysis. Attention is given to the use of research data in program planning and in checking on the effectiveness of church work. 2 s.h.
Mr. WALTON

150. **THE RURAL PASTOR AND HIS WORK.**—A study of the qualifications of the rural pastor and his task. Attention is given to the supervisory methods and material available for the pastor's use and to the current trends in rural life and their influence upon church work. 3 s.h.
Mr. WALTON

151. **THE RURAL CHURCH.**—A study of rural conditions and the place of the church as a community institution and the problems and situations met in local church management and supervision. 3 s.h.
Mr. WALTON

152. **PARISH EVANGELISM.**—A study seeking to prepare the student to plan a comprehensive and continuous program of evangelism for the local church. 2 s.h.
Mr. FISHER

153. **AUDIO-VISUAL AIDS.**—The principles and methods of audio-visual aids in the program of the church. 2 s.h.
Mr. WALTON AND OTHERS

154. **THE URBAN CHURCH.**—A consideration of the function, nature, program, and administration of the effective city church and of the urban minister's distinctive task. 2 s.h.
Mr. REGEN

155. **CHURCH POLITY: COMPARATIVE AND DENOMINATIONAL.**—This is a study of the polity of the different denominations in which the students may serve, based upon the disciplines and practices of the respective denominations. 2 s.h.
Mr. WALTON, Mr. KALE, Mr. REGEN AND OTHERS

(The plan of this course is for the class to meet as a unit one hour a week for the study of the common interests of the denominations; for the other hour the class is divided into groups on the following plan:

a. **THE POLITY OF THE METHODIST CHURCH.**—The study will be based upon the Methodist Discipline.
Mr. KALE

b. **THE POLITY OF THE BAPTIST CHURCHES.**

c. **THE POLITY OF THE CONGREGATIONAL-CHRISTIAN CHURCHES.**

d. **THE POLITY OF THE PRESBYTERIAN CHURCHES.**
Mr. REGEN

(Courses in the polity of other churches will be arranged as needed.)

157. **GROUP WORK.** The principles and skills required in group work as they apply to discussion groups, forums, panels, guided neighborhood conversation groups, social work, community organization and action. 2 s.h.
Mr. WALTON AND OTHERS

FIELD WORK CREDIT.—Granted on written recommendation of the Director of Field Work upon the completion of satisfactory work in C.A. 23, the completion of Field Work Seminar, 142, 144, or 145, and the performance of successful field work. 1 s.h. (Available only in the senior year.)

CHRISTIAN EDUCATION

22. PHILOSOPHY OF CHRISTIAN EDUCATION.—A basic study of the implications of theology and of educational theory for a philosophy of Christian education. 3 s.h. Mr. RICHEY

25. EDUCATIONAL THEORY AND PRACTICE IN THE CHURCH.—An overall and introductory view of the educational functions of the church. Consideration is given to the work of organization, administration and supervision of the church school. 2 s.h. Mr. KALE

125. PSYCHOLOGY AND THEOLOGY.—An inquiry into the relations of psychological and theological interpretations of man. 3 s.h. Mr. RICHEY

129. PSYCHOLOGY OF RELIGIOUS DEVELOPMENT.—Psychological foundations of religious nurture of children and youth. 3 s.h. Mr. RICHEY

131. (Formerly 22.) PSYCHOLOGY OF RELIGION.—A study of psychological aspects of the religious life. 2 s.h. Mr. RICHEY

158. CHRISTIAN EDUCATION AND THE COMMUNITY.—A study of the principles, practices, methods and materials of Christian Education as related to the total community life. 3 s.h. Mr. KALE

159. RELIGION IN HIGHER EDUCATION.—An examination of current philosophies of religion in higher education, with reference to student religious work and college teaching of religion. 2 s.h. Mr. RICHEY

160. EVANGELISM IN THE CHURCH SCHOOL.—A study of the place of evangelism in the work of the church school. 2 s.h. Mr. KALE

161. THEORIES, TYPES AND TECHNIQUES OF TEACHING.—A study of the main principles underlying religious teaching with an examination of the different methods of teaching. 2 s.h. Mr. KALE

162. METHODS AND MATERIALS OF CHRISTIAN EDUCATION.—A consideration of the principal administrative problems of the church school, of the various concepts of the curriculum, and an examination of existing curricula, their nature, use and value. 3 s.h. Mr. KALE

163. WORSHIP AND DRAMA.—Worship in its bearings upon the educational functions of the Christian religion. The use of drama in Christian Education with the creation of dramatic programs of worship and drama writing and production. 3 s.h. Mr. KALE

164. CHRISTIAN EDUCATION OF CHILDREN.—The organization and administration of the work of the church with children of the nursery, kindergarten, primary and junior age groups. 2 s.h. Mr. KALE

165. CHRISTIAN EDUCATION OF YOUTH.—The organization and administration of the youth program in the local church. 2 s.h. Mr. KALE

166. CHRISTIAN EDUCATION OF ADULTS.—A study of the needs of adults; the materials, methods, and principles of organization for the Christian Education of adults. 2 s.h. Mr. KALE

167. HISTORY OF CHRISTIAN EDUCATION IN MODERN TIMES.—A critical study of selected leaders in Christian Education since the Reformation, with special consideration of the American development. 3 s.h. Mr. RICHEY

169. THEORIES OF CHRISTIAN EDUCATION. A critical investigation of current theories of Christian Education. 2 s.h. Mr. RICHEY

See also HISTORY OF RELIGION 126. MISSIONARY EDUCATION.

PASTORAL CARE

26. INTRODUCTION TO PASTORAL CARE.—A study of the background, needs and methods of pastoral work and personal counseling. 2 s.h. Mr. DICKS

170. SEMINAR IN PASTORAL CARE.—For students preparing for full-time pastoral ministry, hospital chaplaincy, industrial chaplaincy, ministry to older people, or work with young people. Practicum. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. class and 1 s.h. clinic. MR. DICKS

171. PASTORAL CARE PRACTICUM I.—A study of pastoral calls and interviews. Particularly for students serving churches or working in clinical situations. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. class and 1 s.h. clinic. MR. DICKS

172. PASTORAL CARE PRACTICUM II.—Advanced pastoral care for students serving churches or working in clinical situations. Prerequisite: P.C. 26 or P.C. 171. 3 s.h. MR. DICKS

173. RELIGION AND HEALTH.—The study of the relation of body and mind and of the religious resources for health through counseling and worship. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. MR. DICKS

174. PERSONAL COUNSELING.—A study of formal personal counseling for those going into the ministry, religious education, and work with college students. 2 s.h. [Open to a limited number of first-year students.] MR. DICKS

175. THE LITERATURE OF PASTORAL CARE.—Directed reading and seminar discussion of writings in the field of psychiatry, psychology, sociology, social work, and ministry, and other fields as they relate to pastoral care. Prerequisite: consent of instructor. 2 s.h. MR. DICKS

176. PASTORAL CARE AND SOCIAL WORK.—Lectures by various specialists and visits to social agencies to orient the minister in relation to other specialists working with individuals and to familiarize him with social service resources. 2 s.h. [Open to a limited number of first-year students.] MR. DICKS

177. ADVANCED SEMINAR IN PASTORAL CARE.—Continuation of 170, which, however, is not a prerequisite. Emphasis upon hospital ministry. Practicum. Prerequisite: P.C. 26 or consent of instructor. 2 s.h. class and 1 s.h. clinic. MR. DICKS AND OTHERS

PREACHING

29-30. SERMON CONSTRUCTION—THEORY AND PRACTICE.—An investigation of the theory of preaching (first semester). Detailed work in practice preaching and a clinical session each week on the application of theory (second semester). 4 s.h. MR. CLELAND AND MR. GARDNER

181. PRACTICAL PROBLEMS IN PREACHING.—Analysis of selected sermons and discussion of problems facing the preacher in the pulpit. Prerequisite: Pr. 29 and 30. 2 s.h. MR. CLELAND

183. MATERIALS OF PREACHING—BIBLICAL.—The problem of authority in the Bible and an evaluation of selected portions of the Bible for present-day preaching. 2 s.h. MR. CLELAND

184. PREACHING VALUES IN THE PAULINE EPISTLES.—A study of the religious experience and theology of St. Paul and its influence on his ethical theory and practice. 3 s.h. MR. CLELAND

185. MATERIALS OF PREACHING—NON-BIBLICAL.—An evaluation of great literature—drama, poetry, biography, fiction—from the point of view of its value for modern preaching. 3 s.h. MR. CLELAND

See also: CHURCH HISTORY 136. PRE-REFORMATION PREACHING.

PUBLIC WORSHIP

178. PUBLIC WORSHIP.—The theory and practice of the worship of the Church: an analysis of the rites and ceremonies in "The Book of Worship." 3 s.h. MR. CLELAND AND MR. RUDIN

180. CHURCH MUSIC.—A study of hymnology, song leading, and problems of the modern church choir. (Offered in both semesters.) 3 s.h. MR. BARNES

SPEECH

17. **EFFECTIVE SPEAKING.**—Fundamentals of preparation and delivery to develop effectiveness in private and public speech. Individual conferences offered in four sections. (Students electing Vocational Group I will, upon recommendation of the instructors in Preaching and Speech, take Speech 132 also.) 2 s.h. MR. RUDIN

132. **PUBLIC SPEAKING.**—Composition and delivery, based upon individual needs. Selection and arrangement of materials, principles of persuasion, intensive practice in delivery. Individual conferences. 2 s.h. MR. RUDIN

134. **ORAL INTERPRETATION OF LITERATURE.**—A course for advanced students designed to develop effectiveness in interpreting the Bible and other commonly used materials of public worship. Individual conferences and drill sections to be arranged. Prerequisite: Speech 17. 2 s.h. MR. RUDIN

V. Senior Seminars

In the third year each B.D. candidate will take one Senior Seminar, yielding 2 s.h. credit. No student may enroll in more than one Senior Seminar without special permission of the Dean. Senior Seminars will not yield Graduate School credit, nor be open to special students.

Enrollment in each Senior Seminar shall be normally not more than twelve. No Senior Seminar need be conducted for an enrollment of less than 5 students. Each Senior Seminar will be in charge of a Chairman. Not less than two instructors will participate in each Seminar. General supervision of all Senior Seminars will be exercised by a standing committee of the Faculty.

The work done in each Senior Seminar should be equivalent to that done in a normal 2 s.h. course, with reading based upon a prepared reading list and a substantial paper or written project report.

FIRST SEMESTER

61. **THE CHRISTIAN FAITH AND ITS PROCLAMATION.**—2 s.h.

MR. CLELAND, MR. CUSHMAN, MR. RUDIN

63. **THE ECUMENICAL MOVEMENT IN THE MODERN CHURCH.**—2 s.h.

MR. SMITH, MR. LACY, MR. SCHAFER

65. **PRACTICAL VALUES OF BIBLICAL RESEARCH.**—2 s.h.

MR. CLARK, MR. STINESPRING

67. **THE NEW TESTAMENT AS MATERIALS FOR TEACHING.**—2 s.h.

MR. DICKS, MR. DAVIES, MR. KALE, MR. RICHEY

SECOND SEMESTER

62. **WESTERN CHRISTIANITY AND NON-CHRISTIAN FAITHS.**—2 s.h.

MR. PETRY, MR. FOSTER

64. **THE OLD TESTAMENT AS MATERIALS FOR TEACHING.**—2 s.h.

MR. KALE, MR. BROWNLEE, MR. STINESPRING

66. **THE CHRISTIAN CHURCH AND SOCIAL CHANGE.**—2 s.h.

MR. BEACH, MR. LACY

68. **CHRISTIAN EXPERIENCE AND CONTEMPORARY CHURCH LIFE.**—2 s.h.

MR. WALTON, MR. MYERS, MR. RICHEY

Summer Session, 1954

COURSES OF INSTRUCTION



Courses carrying credit in the Divinity School only are numbered from 101 to 199. Courses approved for credit in both the Divinity School and the Graduate School of Arts and Sciences are numbered above 200. Students entering the Divinity School for the first time in the Summer Session of 1954 will choose courses numbered from 101 to 199.

First Term: June 9-July 17

S107 (DS). THE PERSON AND WORK OF CHRIST.—An intensive examination of classical types of Christological and soteriological formulation in the history of Christian reflection, assessment and constructive position. For Divinity School students. 3 s.h.—7:40-9:00, 3.109. MR. CUSHMAN.

S120 (DS). THE CREEDS OF CHRISTENDOM.—A historical and interpretative study of great Christian creeds and confessions. For Divinity School students. 3 s.h.—1:40-3:00, 3.109. MR. SCHAFER.

S192 (DS). CHRISTIANITY AND INTERNATIONAL RELATIONS.—An application of Christian Ethics to world problems. For Divinity School students. 3 s.h.—9:20-10:40, 3.109. MR. LACY.

S224 (DS). CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory concerning man with a view to critical evaluation and construction. For Divinity School students and Graduate students. 3 s.h.—11:00-12:20, 3.109. MR. CUSHMAN.

Second Term: July 20-August 27

S138 (DS). GREAT BOOKS IN CHRISTIAN HISTORY.—An intensive study of Augustine's *Confessions*, Thomas a Kempis' *Imitation of Christ*, Erasmus' *Complaint of Peace*, Luther's *Christian Liberty*, Calvin's *Instruction in Faith*, and Andrewes' *Private Devotions*. For Divinity School students. 3 s.h.—7:40-9:00, 3.109. MR. PETRY

S169 (DS). THEORIES OF RELIGIOUS EDUCATION.—A critical investigation of current theories of Religious Education. For Divinity School students. 3 s.h.—1:40-3:00, 3.109. MR. KALE.

S301 (DS). THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in post-Exilic Judaism. For Divinity School students and Graduate students. 3 s.h.—9:20-10:40, 3.109. MR. BROWNEE.

S331 (DS). THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian church prior to the Protestant Reformation. For Divinity School students and Graduate students. 3 s.h.—11:00-12:20, 3.109. MR. PETRY.

Cost, Residential Arrangement, and Student Aid



Fees and Cost

THE University tuition charge is \$175 per semester. Scholarships covering this amount are granted to all Divinity School students. Other charges are as follows:

Fees per semester:

General Fee	\$ 50.00
Approximate cost of meals per semester.....	175.00
Room per semester (double room).....	62.50
Total per semester.....	<u>\$287.50</u>

The "General Fee" is in lieu of all special charges, and includes the following fees: Matriculation, Medical, Library, Damage, Commencement, and Diploma. Divinity School students may secure admission to all regularly scheduled University athletic contests held on the University grounds during the entire academic year by payment of the athletic fee of \$10.00 per year plus any Federal taxes that may be imposed. This fee is payable in the fall semester.

Due to rising costs, a readjustment in charges, including room rents, is being considered. In the event of an adjustment, applicants will be notified.

LATE REGISTRATION

Students matriculating in either semester at a date later than that prescribed in the catalogue shall pay to the Treasurer of the University a penalty of \$5.00.

Living Accommodations

A description of dining facilities and living quarters is given in the *Bulletin of the Divinity School*.

Student Aid

Duke University remits its regular tuition charges to all students enrolled in the Divinity School. In recognition of this, students are expected to render occasional services such as the teaching of Church

School classes and responding to calls for particular services. Financial aid, over and above this, is available only in the form of grants-in-aid and work scholarships. Those appointed to such work agree to give ten weeks' service during the summer months to a church to which they are assigned. In return they receive their board and room for the period of their summer service and amounts varying up to \$600. By special arrangement a student may be assigned to a church for five weeks' work with one-half the stated remuneration. This plan provides an opportunity for earning a large part of the year's expenses, while at the same time assuring the student valuable experience in religious leadership.

In most cases students will be expected to be able to finance themselves for the first semester of work in the Divinity School; those who show that they can carry their school work satisfactorily are then eligible for various forms of financial assistance.

Students who must have additional income over and above their summer's earnings may secure part-time employment during the academic year. They are strongly urged, however, to make their arrangements so that they will not have duties which will prevent their taking the fullest advantage of the educational and cultural opportunities of the Divinity School.

FIELD WORK SUPERVISION

The Department of Field Work is maintained to help students receiving financial aid to secure work opportunities where they may render service for such aid. Their work will be supervised so that their experiences may be part of their ministerial training. Students are also helped to secure work opportunities for the experience to be gained. All students working under the department have their board, room, laundry, and travel expenses provided by the charge served. Certain courses are required of all students engaged in field work and are designed to prepare them for the work in which they engage. All students assigned to field work must maintain satisfactory grades and attitudes.

All students working under the Duke Endowment or similar aid are required to attend the Christian Convocation unless excused in writing by the Dean on recommendation of the Director of Field Work.

LOAN FUNDS

Divinity School students who have satisfactorily completed one semester's work are eligible to apply for loans from the University Loan Funds. Such applications should be filed on the approved forms in the Office of the Secretary of Duke University within the first two weeks of each semester.

ENDOWED SCHOLARSHIP FUNDS

Certain special scholarship funds have been established, the income of which is available for students wishing to secure training in preparation for the Christian ministry. They are listed in the *Bulletin of the Divinity School*.

These scholarships are all awarded on the basis of service performed in a local church, thus providing experience as well as financial aid for the student.

THE SCHOOL OF LAW

Fall Semester begins September 21, 1954

Spring Semester begins January 31, 1955

The School: Its Purposes and Methods



BUILT on the foundation of the School of Law of Trinity College, with its history of legal instruction running back to the middle of the past century, the Duke University School of Law was established in 1924. In 1930 the School was moved into its present building, the Faculty and library were greatly increased, and the activities of the School broadened. The School of Law is a member of the Association of American Law Schools and is on the "Approved List" of the American Bar Association. More than twenty-three states and forty-nine institutions of higher learning are represented in its student body.

The curriculum of the School of Law provides thorough preparation for the practice of law in any state; its graduates have been admitted to the bar in over forty states and the Territory of Hawaii. Opportunities for specialization in particular branches of the law are afforded.

In carrying out the trust imposed by the indenture establishing the Duke Endowment, the School of Law seeks to have the student acquire knowledge and comprehension not only of legal doctrine, but also of the judicial process and of the social, economic, and political problems with which law and lawyers must deal. The method of instruction employed compels analysis of judicial opinions and inquiry into the non-legal as well as the legal considerations which underlie them. In appropriate courses, special consideration is given to the work of the legislative and administrative agencies of government. In recognition of the increasing importance of the role of the lawyer in representing private interests before government agencies and in government service, an unusually broad program is offered in the public law field. Scope for creative student work is provided by seminar courses and supervised individual study and research.

Practical training is not left for the first years of practice. A carefully integrated series of courses is designed to give students actual experience in the work of lawyers. Legal research and writing courses and moot court work in the first and second years are followed in the third by seminar courses emphasizing legal planning and drafting and by practice courses and work in the Legal Air Clinic. A student bar association affords a means whereby the student may gain acquaintance with the professional organizations through which a lawyer may and should contribute to the well-being of his profession and of society.

For a description of the facilities and activities of the School see the *Bulletin of the School of Law*.

Admission, Registration, and Fees



Admission

DIRECTIONS TO APPLICANTS FOR ADMISSION

APPPLICATION must be made on the prescribed Law School application blank which will be sent upon request. No application can be finally passed upon until all required documents are on file. These documents are: (1) the application itself, to which a recently made personal photograph should be attached; (2) a complete transcript of record and evidence of graduation or right to honorable withdrawal from the institution from which credit is offered; (3) letters from (a) a responsible official of the college attended, and (b) a responsible person in the applicant's home community; (4) a report of the applicant's score on the Law School Admission Test described below; (5) a medical certificate on a form supplied by the Law School.

The Law School seeks to select students who give promise of leadership in some of the various phases of professional activity. Applicants for admission and their sponsors are requested to keep this fact in mind.

The Law School Admission Test, referred to above, is administered by the Educational Testing Service and is participated in by a number of the leading law schools of the country. It is given four times a year at examination centers conveniently located throughout the United States. No special preparation for the test is necessary, since it is designed to measure aptitudes rather than knowledge of subject matter. The applicant's score on the test will be considered along with other data in passing upon his admission to the Law School. Application forms and information concerning the test should be procured by writing directly to the Educational Testing Service, P. O. Box 592, Princeton, New Jersey.

TIMES OF ADMISSION

Beginning students may enter only at the opening of the Fall semester in any year. Students who have completed the first year of law study at this or any other law school approved by the Association of American Law Schools may enter at the beginning of any semester.

REQUIREMENTS FOR ADMISSION

An application for admission as a candidate for the degree of Bachelor of Laws may be submitted by any person (1) who is a graduate of a college of approved standing, or (2) who has completed in a college of approved standing work equivalent in number of units to three-fourths of that required for graduation and whose college work in its entirety shows an average grade equal to that required for graduation, the requirement in each case being determined by the regulations of the college where the work was taken.

COMBINED COURSE

A number of colleges, upon application by their students, have permitted those who have completed three years of undergraduate work to enter the Law School of Duke University and upon the satisfactory completion of the first year of law school work to receive their Bachelor of Arts degree from such colleges. It is suggested that students desiring to enter Duke University School of Law make inquiry of their proper college authorities regarding this point.

A student from an undergraduate college of Duke University who has completed therein three years of study may apply to that college to enroll in a combined course wherein his first year of law study may be accepted toward the Bachelor of Arts degree, and, upon the completion of four additional semesters of law study, he will receive the Bachelor of Laws degree.

ADMISSION TO ADVANCED STANDING

Any person who has complied with the requirements for admission set forth in this announcement prior to the commencement of his law study, who presents evidence of the satisfactory completion of at least one year of study at any law school which is a member of the Association of American Law Schools, and who is eligible for readmission to the law school from which he proposes to transfer, may be admitted to advanced standing, subject to such rules as would be applicable to students in this School having a comparable scholastic record. Provisional credit for courses so completed will be given, final credit being conditioned on the completion of at least one full year of law study in this School with an average at least five points above the passing grade. Adjustment of credit for work done in such other law schools may be made by the Dean or by vote of the Faculty.

CANDIDATES FOR GRADUATE DEGREES

Applications for admission to graduate study should be addressed to the Dean of the Law School and should include transcripts of records of legal and pre-legal work.

Registration

Registration must be completed on the first day of each semester. Instruction will begin in all classes on the following day. Registration is conducted in the Law Building. All students, both old and new, are required to register at the beginning of each semester, at which time class schedules and course cards must be filled out and approved. Students who register in any semester at a date later than that prescribed are required to pay to the Treasurer of the University a penalty of \$5.00 for late registration unless excused therefrom. A student's registration for any semester is not complete until he has paid the tuition and fees for that semester. The \$5.00 penalty for late registration will be imposed, therefore, unless the student has paid his tuition and fees by registration day.

REGISTRATION FOR BAR EXAMINATION

Many states now require that a student, prior to or shortly after beginning the study of law, register with the board of bar examiners of the state if he intends to practice therein. Each student should write to the secretary of the board of bar examiners of the state in which he plans to practice and ascertain if that state makes this requirement.

CONDUCT OF STUDENTS

All students are admitted subject to the rules of the University and of the School of Law, and continuance in the School is conditioned upon the observance of such rules.

The University expects of its students loyal and hearty co-operation in developing and maintaining high standards of conduct as well as of scholarship. The University, therefore, reserves the right, and matriculation by the student is a concession of this right, to compel the withdrawal of any student whose conduct at any time is not satisfactory to the University.

Fees and Expenses

Tuition fees are due at the beginning of each semester. The tuition fee is \$175.00 a semester. In addition, a general fee of \$50.00 per semester is required in lieu of separate fees for matriculation, medical service, and the like.

The admission of an applicant is not final until he deposits the sum of \$25.00 with the Treasurer of the University. This deposit will not be returned. It will be credited to the account of the student or, if the student is entitled to the benefits of the Servicemen's Readjustment Act or the Vocational Rehabilitation Act, it will be refunded upon his matriculation.

Law students may secure admission to all regularly scheduled University athletic contests held on the University grounds during the entire academic year by payment of the athletic fee of \$10.00 per year plus any Federal taxes that may be imposed. This fee is payable in the fall semester.

The payment of the general fee entitles the student to full medical and surgical care, with the exceptions noted below. This service is under the direction of the University Physician with the co-operation of the staff of Duke Hospital. It includes hospitalization, medical and surgical care, drugs, dressings, X-ray studies, and ward nursing. A charge for board is made at the same rate as in the University dining halls. Refraction of eyes, treatment of teeth and of all chronic conditions, such as the removal of diseased tonsils, are not included in this service. The cost of any necessary braces and orthopedic appliances, as well as of special nursing, must be borne by the student.

Due to rising costs it may be necessary to consider some readjustment of charges. In the event of an adjustment applicants will be notified.

A statement relative to scholarships, fellowships, and loan funds appears in the *Bulletin of the School of Law*. A description of dining facilities and living quarters is also given in this bulletin.

LAWS REGARDING PAYMENTS

The Executive Committee of Duke University has enacted the following regulations which govern the payment of all fees due the University:

1. The President and the Treasurer of the University have no authority to suspend or in any way alter these regulations.

2. Any student who has failed to pay his bills on the dates advertised in the catalogue is denied the right to attend classes until his account is settled in full; subsequent withdrawal does not entitle a student to a refund.

3. No student is considered by the Faculty as an applicant for graduation until he has settled with the Treasurer for all his indebtedness to the University.

4. No student who has not settled all his bills with the Treasurer of the University is allowed to stand the midyear or final examinations of the academic year.

When a student wishes his bills sent to his parents or guardian, the student or his parent or guardian must so notify the Treasurer of the University in writing in due time, but this in no way releases the student from liability to established penalties, if his bills are not paid on the dates advertised.

Bachelor of Laws Degree



UPON favorable recommendation of the Faculty, the degree of Bachelor of Laws will be conferred on students who shall have successfully completed six semesters' study of law, the last two semesters of work immediately preceding the granting of such degree having been completed in this School.

A student shall be deemed to have completed successfully six semesters' study of law if during this period he has

(1) secured a passing grade in courses aggregating seventy-eight semester hours;

(2) secured in every required course a grade not requiring repetition thereof; and

(3) secured a weighted average at least five points above passing in all work taken other than first-year courses, or, if the grade in such work is lower than that above specified, an average grade of five points above passing in all work taken.

Students who have spent only their last two semesters of study in residence in this School must have received a weighted average at least five points above passing for that year.

MINIMUM AND MAXIMUM STUDENT LOADS

No regular student is permitted to take less than ten course hours per semester. No first-year student is permitted to take courses in excess of the first-year program.

Second- and third-year students are not permitted to take for credit more than fifteen course hours per semester; nor to audit and take for credit more than sixteen course hours per semester. In exceptional cases, students may petition the Faculty for permission to take more or less than the prescribed maximum or minimum loads.

ATTENDANCE

Regular class attendance is required. The right to take the examinations, as well as the privilege of continuing one's membership in the School at any time, is conditioned upon regular attendance at the exercises of the School.

STANDARDS OF SCHOLARSHIP

GRADES.—The final grades in each course are given in numerical terms which are equivalent to letter grades according to the following scale: 80 to 100, A; 70-79, B; 55-69, C; 50-54, D; 0-49, F.

A grade of 50 is necessary for passing a course. Where a grade below 50 is given a student in any required course, the course must be repeated if the instructor reports the grade with the notation "must repeat." When a student is required by the instructor to repeat a course which he has failed, the grade given after such repetition supersedes the previous grade in the course.

ELIGIBILITY TO CONTINUE LAW STUDY.—Any student who at the end of his first year or at the end of any subsequent semester, has an average grade lower than 50 on all the work then taken is ineligible to continue his work in the School. Any other student (1) whose average final grade at the end of his first semester is below 50, or (2) whose average grade at the end of any subsequent semester on all the work then taken is below 55, or (3) who in any single semester or in any single year receives failure grades in courses totaling eight or more semester hours, may at any time be declared by the Dean ineligible to continue.

NOTIFICATION OF UNSATISFACTORY SCHOLASTIC STANDING.—Every student subject to the provisions of the second sentence of the paragraph above, who has not been declared ineligible to continue his work in the School will be given a formal, written notice by the Dean's Office. This notice will set forth his average grade or grades and inform him (1) that he will be subject for the ensuing year to the special supervision of the Dean who may order his dismissal from the School in the event of his failure to maintain a satisfactory scholastic standard, and (2) that he will be ineligible to receive a degree unless his work meets the scholastic requirements for graduation which will be set forth in full in such notice.

Every other student whose average final grade at the end of any semester on the work of that semester, or on all work then taken, does not exceed the minimum average grade required for graduation by more than two points will be given a notice similar to that provided for above.

Graduate Work in Law



Objectives of the Graduate Study Program

THE graduate program of the School of Law is framed with a view to the encouragement and recognition of legal scholarship. It is addressed to the needs of those who have objectives consistent with the purposes of graduate legal education. It provides training for the qualified student who aspires to a teaching career, or who wishes to become proficient in a special field of the law, to do serious legal research, to prepare himself for a public law practice in or out of government, or to acquire a broader and deeper legal education than the undergraduate curriculum offers.

Master of Laws

ADMISSION TO CANDIDACY FOR THE DEGREE OF MASTER OF LAWS

Any person who has received the first degree in law from a law school qualified for membership in the Association of American Law Schools may be admitted as a candidate for the degree of Master of Laws, provided he satisfies the Committee on Graduate Study that his objective in desiring to do graduate work in law is consistent with the purposes for which the program is offered, and provided he demonstrates to the Committee, on the basis of his law school record, his capacity to take and profit by graduate work in law. In exceptional cases an applicant who does not meet the above requirements may, on vote of the Faculty, be admitted to candidacy for this degree if he is able to demonstrate that he is specially qualified, as by reason of practice or teaching. Normally the applicant will be required to show a level of scholarship appreciably higher than that required for the first degree in law at the institution from which he received that degree. An exceptionally high record in law school and in the graduate study program is expected of those who aspire to a teaching career. It should be emphasized that the graduate study program is designed for graduates with a definite objective, not for those who seek to pursue further law study simply from disorientation.

REQUIREMENTS FOR THE DEGREE OF MASTER OF LAWS

The degree of Master of Laws is reserved for students who, having demonstrated their capacity for graduate work in law, maintain a level of scholarship substantially higher than that required for the degree of Bachelor of Laws.

The candidate for this degree is required to complete a course of study comprising not less than twenty nor more than twenty-six semester hours, or approved research equivalent thereto. Two full semesters are required for the completion of this program. A candidate for this degree is required to include in his course of study at least two of the following courses: International Law, Jurisprudence, and Legal History. In addition to the minimum requirement of twenty semester-hours, the candidate is required to submit an essay representing substantial research on a legal subject. This essay is to be prepared under the supervision of the instructor in charge of the field in which the research is done. The candidate will find it helpful to have formulated a project of research, or alternative projects, before his admission to graduate study or, at any rate, before pursuing his graduate study in residence.

The candidate's course of study will be selected, ordinarily, from the following list of courses: Public Regulation of Business Seminar, Jurisprudence, Conflict of Laws, International Law, Legal History, Advanced Legal Accounting, Corporate Planning, Debtors' Estates, Insurance, Corporate Reorganization, Securities Regulation, Credit and Insolvency, Family Law, Family Law Seminar, Future Interests, Tax and Estate Planning, Labor Relations, Labor Standards, Labor Law Seminar, Federal Taxation I, Federal Taxation II, and State Taxation. This program of study is not inflexible. In appropriate cases the candidate will be encouraged to take related work in other departments of the University. Other courses of comparable content may be substituted for those listed. In special circumstances, credit not in excess of two hours per semester may be arranged for special, supervised research projects.

Doctor of Juridical Science

ADMISSION TO CANDIDACY FOR THE DEGREE OF DOCTOR OF JURIDICAL SCIENCE

Any person holding the degree of Master of Laws from this or any other law school which is qualified for membership in the Association of American Law Schools may, on vote of the Faculty, be admitted to candidacy for the degree of Doctor of Juridical Science, provided he completed the work for the Master's degree with distinction.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF JURIDICAL SCIENCE

Upon favorable recommendation of the Faculty, the degree of Doctor of Juridical Science will be conferred on students admitted to candidacy for that degree who complete and submit a monograph or series of essays suitable for publication and deemed by the Faculty to be of distinguished character and who pass an oral examination before a special committee appointed for that examination. At least one academic year, and, in the absence of an extension granted by the Faculty, not more than three years, must elapse between the award of the Master's degree and the award of the degree of Doctor of Juridical Science. Students who have received the degree of Master of Laws from another law school must spend at least two full semesters engaged in research at this School, and in addition may be required to complete a course of study prescribed by the Committee on Graduate Study. The monograph or series of essays required may be based upon, or be an extension of, the essay required for the Master's degree, provided substantial additional research is represented.

Post-Graduate and Refresher Courses

The School of Law provides instruction for students not meeting the requirements for admission to candidacy for graduate degrees who desire refresher courses or who desire simply to complete a fourth year of law school work. The successful completion of the courses taken by such students may be evidenced by certificate of the Dean.

Program of Instruction



THE program of instruction of the School of Law has been thoroughly revised as a result of studies made by the Faculty. The curriculum had become overcrowded. For years new courses have been added at this and other schools as new fields of law have become important; old courses have been retained. Students who wished to specialize in particular fields often found it necessary to omit some of the older, more fundamental courses. Insufficient attention had been given to legal writing, the drafting of legal instruments, and legal planning.

The newly adopted curriculum is designed to insure that students may prepare to specialize in practice without foregoing any part of the basic legal education required for general practice and desirable for all specialists. Courses have been combined; duplications in courses have been eliminated. The larger part of students' third year has been opened for studies of specialties. New courses and seminars have been added, especially in the third year in which teaching methods will be different from those used in the older courses. In these courses and seminars legal writing and drafting and legal planning will be emphasized.

The courses offered are listed below. They are grouped under three headings: First-Year Program, Second-Year Program, and Third-Year Courses. At page 31 the individual courses are described; in that section of the Bulletin they are grouped under the following headings: Business Courses; Property Courses; Public Law Courses; General Courses; Procedure and Practice Courses.

THE FIRST-YEAR PROGRAM is prescribed. It includes basic courses in the fields of contracts, business associations, property (including sales and other chattel transactions), and torts. These courses serve also to acquaint the student with the nature of the judicial process (which is stressed in Chattel Transactions), the court system and court procedure (stressed in Torts), and legal history (stressed in the property course and in other courses). In the field of public law, legislation and the legislative process are studied in the first semester; criminal law and procedure is given throughout the year. A course in research and writing (which is continued through the first semester of the second year), after consideration of how the law is found in law books, trains students in writing memoranda of law and legal arguments and in drafting legal documents; the course emphasizes, for

each student, the law of the state in which he intends to practice, and introduces students to the art of legal planning. It includes the preparation of briefs and the arguing of moot court cases.

The SECOND-YEAR PROGRAM comprises nearly all the other basic courses which all students need regardless of what kind of law practice they plan to enter and the courses prerequisite to third-year work in special fields and in legal planning. Third-year courses may be substituted for non-required courses in this program upon approval of the instructor. The research and writing course continues through the fall semester. The basic work in property and business associations is completed. In the field of business transactions, the students study negotiable instruments and security. A course in federal income taxation, basic to advanced third-year work for specialists, adequately covers the subject for students not planning to specialize in it. Legal and equitable remedies, and court procedure in civil cases, are studied in the course in remedies. Students continue their study of public law in courses in constitutional and administrative law.

THE THIRD-YEAR COURSES (of which an aggregate of 10 to 15 hours each semester is to be selected by each student) are designed to emphasize legal planning and drafting and to enable students to equip themselves to specialize in particular fields. The faculty recommends that all student complete their basic legal education by taking courses in evidence and legal ethics. There are also fundamental courses in legal history and jurisprudence and in conflict of laws and international law. The rest of the third-year courses are in specialties: they are grouped below under the headings (1) business (including advanced corporation law), (2) estates, family, and property, (3) procedure, practice, and local law, and (4) public law (including labor law and taxation). A number of these specialty courses (those preceded by asterisks in the list below) emphasize legal planning and drafting. Each student is required to include two of these courses in his third-year program; enrollment in each is limited.

The First-Year Program

	SEMESTER HOURS	
	Fall	Spring
Chattel Transactions	2	2
Contracts	4	2
Criminal Law and Procedure	2	2
Research and Writing I	1	1
Torts and Introduction to Procedure	3	3
Legislation	3	
Business Associations I		2
Estates in Land		3
	—	—
	15	15

The Recommended Second-Year Program

	SEMESTER HOURS	
	Fall	Spring
Civil Procedure [Required]	3	2
Constitutional Law and Federal Courts [Required]	3	2
Research and Writing II [Required]	1	
Administrative Law [Required]		3
Business Associations II	3	
Conveyancing	3	
Restitution and Equitable Remedies		2
Negotiable Instruments	2	
Security		3
Federal Taxation I		3
	15	15

Substitutions of third-year courses for non-required second-year courses may be made with permission of the instructors in the former. Third-year courses suitable for study in the second year are Family Law, Insurance, Labor Relations, Trusts, and Wills. A student omitting a second-year course from his second-year program may find himself unable to take that course in his third year because it and a third-year course he wishes to take may be scheduled at the same hour.

The Third-Year Courses

Students are to select courses aggregating 10 to 15 hours each semester. Every student must select two of the starred courses listed under "B. Specialties." These courses emphasize legal planning and drafting. Enrollment in each of them except Legal Aid Clinic is limited to 15. Legal Aid Clinic counts as a single starred course, though it is a year course. No student may take more than two starred courses in the same semester without the consent of the Dean and of the instructors in the starred courses involved.

A. ADVANCED COURSES

Conflict of Laws	3
International Law	3
Jurisprudence	3
Legal History	2

B. SPECIALITIES

I. Business (See also "IV. Public Law.")

*Corporate Planning and Drafting	2
Insurance	2
Debtors' Estates	3
*Advanced Legal Accounting (Not Offered 1955-1956)	2
*Securities Regulation (Not Offered 1954-1955)	2

II. Estates, Family, Property

Family Law	2
Future Interests	3
Trusts	3
Family Law Seminar	2
*Tax and Estate Planning	2
Wills and Administration of Estates	3

III. Procedure, Practice and Local Law		
Evidence	2	2
*Legal Aid Clinic	2	2
*Case Studies	1	
North Carolina Statutes and Decisions	2	
Legal Ethics		1
North Carolina Practice		2
IV. Public Law		
Federal Taxation II	3	
Labor Relations	3	
Municipal Corporations (Not offered 1954-55)	2	
*Constitutional Law and Federal Courts Seminar (Not Offered 1954-55)		2
*Labor Law Seminar		2
Labor Standards		2
*Public Regulation of Business Seminar		3
State Taxation		2
*Tax and Estate Planning		2

Description of Courses



Business Courses

ADVANCED LEGAL ACCOUNTING. The study and analysis, in more detail than in Business Associations II, of the balance sheet, the income statement, and the accountancy concepts and principles that serve as controls over corporate distributions; financial reporting and investor protection; trust and estate accounting; and some problems in accounting with respect to public utility regulations. Two hours a week second semester. (Not Offered 1955-56.)

MR. LATTY

BUSINESS ASSOCIATIONS I. Legal principles concerning association in business by agency, partnership, other unincorporated forms and corporations. Creation, form and nature of agency, partnership and corporation, corporate existence (de facto corporations, corporate entity and its limitations), powers, duties, liabilities and compensation of agents, partners, officers and directors, risks in conduct of business by representatives (vicarious liability in tort, authority to contract), imputation of notice and knowledge, scope of enterprise (*ultra vires*), revocation and termination of authority, ratification, undisclosed business associates, stability of the associational relationship. The purpose of this course is to grasp basic principles of Agency and Partnership and elementary doctrines of corporation law as a foundation for the advanced corporation course (Business Associations II). Two hours a week second semester.

MR. LATTY

BUSINESS ASSOCIATIONS II. Promoters, subscription to and issue of shares, stock structure and corporate capital, dividends, preferred stock, bonds, capital increases and reduction, corporate re-acquisition of own stock, elementary principles of corporate accounting, public issue of securities, stock transfers, fundamental corporate changes (recapitalization, sale, merger and consolidation, dissolution), stockholders' suits, and certain principles concerning management and operation not studied in Business Associations I. Three hours a week first semester.

MR. LATTY

CONTRACTS. The formation and legal operation of contracts in general, with attention to problems of drafting and counseling as well as of litigation and extrajudicial settlement. Legal and equitable remedies in contract cases, including damages, specific performance, and restitutionary remedies, and important procedural devices incident to such remedies. Four hours a week first semester, two hours a week second semester.

MR. STANSBURY

CORPORATE PLANNING AND DRAFTING. The student is given hypothetical corporate problems (perhaps taken from the practicing lawyer's desk) on a client's proposed course of action; each problem is designed to require the student to grasp the business situation and goals involved, analyze for pertinent legal principles, plan the transaction to avoid legal and business (including taxation) pitfalls, plan the requisite steps to consummate the desired transaction, draft the appropriate papers and present his research. Two hours a week first semester.

MR. LATTY

SECURITY. Contracts of accommodation, including those on bills and notes, contracts of suretyship and guaranty, letters of credit. Mortgages and security interests in real property, chattel mortgages, pledges, trust receipts, conditional sales and consignment contracts. Three hours a week second semester.

MR. SHIMM

DEBTORS' ESTATES. Rights of creditor and debtor in the administration of insolvent estates in bankruptcy, with comparisons to alternative methods of administration: compositions, assignments for the benefit of creditors, receiverships, and

special proceedings for certain classes of debtors. An introduction to proceedings for the rehabilitation of debtors under the Bankruptcy Act, including arrangements and reorganization. Three hours a week first semester. MR. SHIMM

INSURANCE. The nature of "insurance"; state supervision and control; types of insurance organization; the legal requirement of insurable interest; interest of others than the named insured; the measure of indemnity and subrogation; the beneficiary's interest in life insurance; the insured event, and excepted causes; warranties, representations and concealment; the making of insurance contracts; waiver, estoppel and election. Two hours a week first semester. TO BE ANNOUNCED

NEGOTIABLE INSTRUMENTS. Negotiability of bills and notes; execution of negotiable instruments; obligations of parties; formal requisites of negotiability; transfer and negotiation; requisites of holding in due course; equities and defenses; discharge. Two hours a week second semester. MR. SHIMM

PUBLIC REGULATION OF BUSINESS SEMINAR. See Public Law Courses, page 33 for description. Three hours a week second semester.

MR. LIVENGOOD AND MEMBERS OF THE ECONOMICS DEPARTMENT STAFF

SECURITIES REGULATION. Regulation of distribution and marketing of securities and protection of the investor under the Securities Act of 1933, the Securities and Exchange Act of 1934, the Public Utility Holding Company Act of 1935 and the Trust Indenture Act of 1939, with summary treatment of other related federal legislation; the role of the Securities and Exchange Commission; a brief survey of state regulation. Considerable emphasis is placed on civil liabilities under the federal legislation. Two hours a week second semester. (Not offered 1954-55.)

MR. LATTY

Property Courses

CHATTEL TRANSACTIONS. The course covers most of the topics generally treated under the heading of Personal Property, Bailment and Sales; application of the concepts of possession and title in the law of personal property; the bailment relationship; artisan's lien; transfer of chattels by gift, sale and miscellaneous inter vivos transactions. In Sales, the emphasis is on remedies and performance. Special attention is given to the judicial process and technique. Problems of chattel mortgages, pledges and sales financing are considered only incidentally, their general treatment being reserved for the course in Credit Transactions. Two hours a week throughout the year. MR. LATTY

CONVEYANCING. Form and execution of deeds, description in deeds; rents, licenses, easements and profits; covenants and agreements running with the land at law and in equity; estoppel by deed; recording and title registration; aspects of public control of land use. Three hours a week first semester. MR. BOLICH

ESTATES IN LAND. Historical introduction to real property with a detailed consideration in the modern law of possessory estates, including the fee simple, the fee tail, the life estate, the estate for years, and other non-freeholds; concurrent ownership; incidents of possessory ownership relative to water, lateral and sub-jacent support and air. Three hours a week second semester. MR. BOLICH

FUTURE INTERESTS. Future interests in real and personal property; reversions; vested and contingent remainders; executory interests; rights of entry; possibilities of reverter; gifts to classes; powers; perpetuities; construction of wills and deeds as affecting the validity and characteristics of the interests created thereby. Three hours a week first semester. MR. BOLICH

TAX AND ESTATE PLANNING. Seminar devoted to problems and techniques of tax and estate planning. Federal Taxation I and Federal Taxation II and Future Interests are prerequisite to enrollment in the seminar. Two hours a week second semester. MR. BOLICH AND MR. LOWNDES

TRUSTS. The nature, creation and elements of a trust; transfer of the beneficiary's interest; administration of trusts; termination and modification of trusts; charitable trusts; liabilities to third persons; and liabilities of third persons. Three hours a week first semester. MR. LOWNDES

WILLS AND ADMINISTRATION OF ESTATES. Descent and distribution; property rights of surviving spouse; children and descendants; ancestors and collaterals; effect of claimant's misconduct. Making and revoking wills; testamentary capacity; execution of wills; holographic and special types; integration; testamentary character and intent; revocation; operation of legacies and devices. Probate and administration; grant of administration; probate and contest of wills; assets; contracts, sales and investments by personal representative; claims; settlement of the estate. Three hours a week second semester. MR. McCLAIN

Public Law Courses

ADMINISTRATIVE LAW. The formulation of statutory schemes of administrative regulation: the organization of administrative agencies; the determination, promulgation and enforcement of administrative programs; the respective spheres of administrative and judicial responsibility; judicial control over administrative action. Practice and procedure before administrative agencies: informal conferences and negotiations; formal hearings; constitutional limitations. Three hours a week second semester. MR. KRAMER

CONSTITUTIONAL LAW AND FEDERAL COURTS. Judicial protection against arbitrary governmental action; the history of the concept of a "higher law"; the constitutional clauses relied upon. The organization and jurisdiction of the federal courts; when and how judicial review can be invoked; limitations on governmental power with respect of economic matters, civil liberties and criminal and civil procedure. The powers of Congress, express and implied; limitations on State governmental powers resulting from the existence and from the exercise of Congressional powers. The constitutional questions involved in administrative law, conflict of laws, intergovernmental tax immunities, jurisdiction to tax, and state taxation of interstate commerce are covered more fully in other courses. Three hours a week first semester, two hours a week second semester. MR. MAGGS

CONSTITUTIONAL LAW AND FEDERAL COURTS SEMINAR. Advanced study of current Supreme Court cases and of particular fields in constitutional law and history and in federal court organization. Two hours a week second semester. (Not offered 1954-55.) MR. MAGGS

CRIMINAL LAW AND PROCEDURE. An introductory study of the law of crimes and the administration of criminal justice; analysis of the criminal act and the mental element in crime; consideration of specific offenses as defined by statute and the common law; discussion of typical defenses in relation to specific crimes; elementary criminal procedure; study of the Anglo-American penal system. Two hours a week throughout the year. MR. McCLAIN

FEDERAL TAXATION I. An introduction to the federal taxation with particular emphasis on the federal income tax. The course is designed as a final course for students who do not intend to specialize in tax practice and as an introductory course for those who do. Three hours a week second semester. MR. LOWNDES

FEDERAL TAXATION II. A more advanced course in federal taxation. The principal emphasis of the course is on the federal estate and gift taxes, and the relation of those taxes to the federal income tax. Three hours a week first semester. MR. LOWNDES

INTERNATIONAL LAW. A survey of public international law of peace, as evidenced especially in decisions of national and of international courts; the drafting and interpretation of treaties; the nature and handling of international claims; the organization and jurisdiction of international tribunals, with special reference to the International Court of Justice; developments with respect to the codification of the law. Three hours a week second semester. MR. WILSON

LABOR LAW SEMINAR. An intensive examination of significant problems in collective bargaining, union-management relations and labor dispute settlement, with emphasis upon the drafting and interpretation of contract clauses, theories and techniques in contract negotiation and grievance handling, voluntary arbitration and other procedures for the adjustment of disputes, and the interrelation of the legal and economic aspects of labor problems. Prerequisite: Labor Relations. Two hours a week second semester. MR. LIVENGOOD

LABOR RELATIONS. A study of the law relating to collective bargaining and concerted labor activities, including the National Labor Relations Act and related legislation, the legal aspects of strikes, boycotts and picketing, the negotiation and administration of collective bargaining agreements, procedures for the settlement of labor disputes, and relations between the union and individual employees. Three hours a week first semester. MR. LIVENGOOD

LABOR STANDARDS. Government regulation of conditions of employment, including the Fair Labor Standards Act and other wage-hour and child-labor statutes, unemployment insurance and other social security legislation, employers' liability and workmen's compensation acts, and related laws establishing minimum standards for the creation, continuance and termination of the employment relationship. Two hours a week second semester. MR. LIVENGOOD

LEGISLATION. A general introduction to the field of Public Law, including, among others, the following topics: organization, techniques, procedures, and problems of legislative bodies; formulation of legislative policies; and drafting and interpretation of statutes. Three hours a week first semester. MR. LIVENGOOD

MUNICIPAL CORPORATIONS. The nature of municipal corporations; their external constitution; their internal constitution; their powers; their liabilities; remedies for and against municipal corporations. Two hours a week first semester. (Not offered 1954-55.) TO BE ANNOUNCED

PUBLIC REGULATION OF BUSINESS SEMINAR. Intensive study of the federal antitrust laws and their common-law background, with emphasis on the economic policies involved. As a corollary of critical examination of the Sherman Act, Clayton Act, Federal Trade Commission Act and related legislation designed to enforce competition as the primary control of the economic system, some consideration is given to legal measures which supplement or replace competition, such as direct regulation of business and government intervention by public loans, guaranties and ownership. Three hours a week second semester.

MR. LIVENGOOD AND MEMBERS OF THE ECONOMICS DEPARTMENT STAFF

STATE TAXATION. Constitutional limitations on the taxing power; jurisdiction to tax; state excise taxes; and the general property tax. Two hours a week second semester. MR. LOWNDES

TAX AND ESTATE PLANNING. See Property Courses, page 32, for description. Two hours a week second semester. MR. BOLICH AND MR. LOWNDES

General Courses

CONFLICT OF LAWS. A study of the special problems which arise when the significant facts of a case are connected with more than one jurisdiction. Recognition and effect of foreign judgments; choice of law; federal courts and conflict of laws; the United States Constitution and conflict of laws. Three hours a week second semester. MR. KRAMER

FAMILY LAW. A seminar approach to the cases, statutes, and sociological theories covering the contract to marry, its formation and breach; marriage; annulment; divorce; separation; property rights; and international jurisdiction. Selected materials. Two hours a week first semester. MR. BRADWAY

SEMINAR IN FAMILY LAW. A seminar approach to the efforts of the social sciences, including the law, to deal with the intricate and perplexing problems of the modern family. Readings are assigned in legal and sociological material. Class

discussions are based upon some central topic, such as divorce, domestic relations courts, etc. Written reports required in lieu of an examination. Family Law is prerequisite. Two hours a week second semester. MR. BRADWAY

JURISPRUDENCE. Discussion of some of the basic problems of classical and contemporary juristic theory, with applications to cases and statutes. Open to all graduate students, and, with the consent of the instructor, to qualified second and third year students. Three hours a week first semester. MR. KRAMER

LEGAL HISTORY. A study of the development of fundamental English and American legal institutions, with primary emphasis upon the establishment and growth of American law from the colonial period to the present. Two hours a week second semester. MR. BOLICH

NORTH CAROLINA STATUTES AND DECISIONS. A study of selected statutes of North Carolina with discussion of their application, and an analysis of the decisions of the Supreme Court of North Carolina construing them. Two hours a week first semester. MR. BRYSON

RESTITUTION AND EQUITABLE REMEDIES. A survey of equitable remedies in general (including enforcement of equity decrees) and of important parts of the fields of equity and restitution that are not covered in other courses. Two hours a week second semester. TO BE ANNOUNCED

TORTS AND INTRODUCTION TO PROCEDURE. The bases of liability in damages for personal injuries and injuries to property; bases other than fault; negligence; intentional infliction of harm. Procedure in jury trials; proof of negligence; causation and "proximate cause"; defenses; the damages recoverable and equitable relief obtainable. Special rules applicable to occupiers and owners of land, motor vehicle accidents, suppliers of goods and remote contractors. Misrepresentation and fraud; defamation; assault and battery; false imprisonment. Three hours a week throughout the year. MR. MAGGS

Procedure and Practice Courses

CASE STUDIES. Detailed analysis of an important civil suit, under supervision of a visiting instructor who was counsel therein. The instructor's files and the record and briefs will be studied. Consideration will be given to how the matter first arose and what business or other problems of the client were involved; how counsel first analyzed the matter and how he ascertained relevant facts; how counsel prepared for and conducted the trial and appellate proceedings. One hour a week first semester. INSTRUCTOR TO BE ANNOUNCED

CIVIL PROCEDURE. A study of modern methods of pleading (including Federal Rules of Civil Procedure) and their relationship to the historical developments insofar as such developments affect or explain present-day rules; also a treatment of real party in interest, joinder of parties, joinder of causes of action, counterclaims, objections to pleadings, amendment to pleadings, and summary disposition of cases. Special emphasis is placed on trial and appellate practice. Three hours a week first semester, two hours a week second semester. TO BE ANNOUNCED

EVIDENCE. Examination of witnesses; admission and exclusion; competency of witnesses; privilege; relevancy; demonstrative evidence; writings; the hearsay rule and exceptions thereto; the burden of producing evidence; presumptions; the burden of persuasion; judicial notice. Two hours a week throughout the year. MR. STANSBURY

LEGAL AID CLINIC. This course is designed to develop in the student self-confidence and the professional habit of handling his cases in a methodical manner. During the first semester the student learns to: interview a client in an orderly manner, determine the gaps in the client's story and filling in these gaps with information from other proper sources; evaluate facts; make a record of facts including the documents used for the purpose; diagnose a case for legal "symptoms" and develop legal theories; organize research; plan a campaign at law. The class becomes familiar with the courthouse as a source of facts; and with a law office

as a place in which a lawyer functions. Special exercises like searching a title to real estate, preparing a criminal case for trial, are assigned. During the second semester the student learns to conclude a case in an orderly professional manner by education; by conciliation; by litigation. The climax is a jury trial with expert witnesses. The students operate under the supervision of a staff member throughout the year. Students are assigned to duty in rotation in the Legal Aid Clinic office and in the downtown office. This gives them a chance to interview flesh and blood clients and to see the progress of real cases. By preparing trial briefs in court and criminal cases the student learns how to get ready for his appearance in the court room. Two hours a week throughout the year. MR. BRADWAY

LEGAL ETHICS. A seminar approach to the ethical problems of the lawyer and the profession. Readings are assigned in legal biography, law reform, the history of the profession, legal aid work. Class discussions cover canons of ethics, statutes, cases, and opinions of grievance committees dealing with the daily problems of the practicing lawyer. A written report is required on some phase of the reform of the administration of justice. One hour a week second semester MR. BRADWAY

NORTH CAROLINA PRACTICE. A study of the steps in an action at law from the issuance of process to the entry of final judgment including service of process; appearance and waiver of process; selecting the jury; various motions made during the trial; submission of case to jury; verdict; judgment; noting and perfecting appeal. Also included are such topics as jurisdiction of various courts in North Carolina; venue; trials without a jury; provisional remedies and special proceedings. Two hours a week second semester. MR. BRYSON

Legal Research and Writing

RESEARCH AND WRITING I. Classroom instruction and individual problems in the use of law books, the preparation of memoranda of law, and moot court briefing and argument. The first year of a two-year program designed to familiarize the student with the materials and methods of legal research and legal writing. Two semester-hours credit. MESSRS. STANSBURY, BRYSON, AND BRADWAY

RESEARCH AND WRITING II. The second year of the two-year program of research and writing. In addition to more advanced work of the kind involved in the first-year program, the student will assist in evaluating the work of first-year students and in judging first-year moot court arguments. Required of all second-year students. One semester-hour credit. MESSRS. STANSBURY, BRYSON, AND BRADWAY

Upon recommendation of the Committee on Graduate Study, seminars not listed in the Bulletin may be created or arrangements made for supervision of special research by individual graduate students in any subject.

All matters presented in this Bulletin are subject to change as the University or the School of Law may deem expedient.

THE SCHOOL OF MEDICINE

Winter Quarter, 1954, begins January 4

Spring Quarter, 1954, begins March 29

Summer Quarter, 1954, begins July 6

Autumn Quarter, 1954, begins October 4

Winter Quarter, 1955, begins January 3

Spring Quarter, 1955, begins March 28

Summer Quarter, 1955, begins July 5

Autumn Quarter, 1955, begins October 3

General Statement



DUKE UNIVERSITY School of Medicine and Duke Hospital were established in 1930, through the munificent gift of the late James B. Duke. The School of Medicine has been planned to insure the greatest correlation between the various departments. These facilities are available also for students who are studying for degrees other than that of Doctor of Medicine. The School of Medicine has been approved as Class A by the American Medical Association and is also a member of the Association of the American Medical Colleges. On October 5, 1953, three hundred and sixteen students were enrolled.

Aims of the School

Duke University School of Medicine, from its beginning in 1930, has maintained as its major objectives: (a) the cultivation and teaching of medicine on a strictly scientific basis; (b) the correlation of medical research with medical teaching at all levels of its teaching, and (c) the continuous search for and experimentation with new or improved methods of teaching scientific medicine. In order to attain these objectives, the School has been organized, its physical plant planned, and its administrative structure constituted so that there exists the closest possible academic and physical relationship between undergraduate and graduate work in the University and the School of Medicine, and also between the basic medical sciences and the clinical sciences within the School and its integrated teaching Hospital. The professional staff of the School is composed of two general categories, those with permanent appointment and unlimited tenure, and those with temporary appointment. The latter, the much larger group, is maintained on a highly fluid basis, which makes possible a high degree of selectivity in appointment for academic training and scientific research. The smaller group of permanent appointees has in every individual a background characterized by academic and scientific attainment. The professional, academic, and scientific environment created by the staff is thus such as to engender scientific inquiry and to encourage diligent pursuit of the medical sciences in all their relationships. The staff at all levels devotes its entire professional time to the activities of the School or Hospital.

Facilities of the Hospital

Duke Hospital, an integral part of Duke University School of Medicine, has every modern convenience for the diagnosis, proper care, welfare and comfort of the patients, both ward and private, white and colored, whether they come from Durham or from a distance. It has 592 beds, including 30 bassinets for newborn infants, and 20 premature nursery bassinets. *Medicine*, including dermatology and neurology, has 77 ward beds; *surgery*, including urology, otolaryngology, ophthalmology, and orthopaedics, 135 ward beds; *obstetrics*, including *gynecology*, 59, and 50 bassinets; *psychiatry*, 5; and *pediatrics*, 40. There are 209 private rooms and semiprivate cubicles, 12 air-conditioned operating rooms, 4 obstetric delivery rooms, and ward and student laboratories. Offices and examining rooms for members of the Medical Faculty are located in the Hospital. The Hospital has been approved for internships and residencies by the Council on Medical Education and Hospitals of the American Medical Association, and the American College of Surgeons.

Duke Hospital and its Out-Patient Clinic were opened for patients on July 21, 1930. Through December 31, 1952, 455,235 individuals have been examined, diagnosed and treated. The average daily census of hospital patients during the past year was 458; 159,279 visits were made to the Out-Patient Clinics during the same period. Twenty-one per cent of the patients come from within a radius of twenty miles, the remaining 79 per cent come from the other 99 counties in North Carolina and from 36 other states and 3 foreign countries. The average distance traveled by the patients is more than seventy miles.

The Private Diagnostic Clinic was organized to co-ordinate the diagnostic studies, and to give better care to the complicated problems arising in the examination of private patients. The Clinical Staff of Duke Hospital and School of Medicine forms the professional staff of this clinic, while the financial side is handled by a business manager. The offices and examining rooms are in Duke Hospital, and all of the laboratory and diagnostic facilities of the Hospital and School of Medicine are utilized by the Clinic.

Library

JUDITH FARRAR, A.B. B.S., *Librarian and Assistant Professor of Medical Literature.*

MILDRED PERKINS FARRAR, A.B., *Assistant Librarian.*

"To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."—SIR WILLIAM OSLER.

In addition to the General Library of Duke University and the departmental libraries of biology, chemistry, physics, etc., which have 1,130,000 volumes available for medical students, Duke Hospital Li-

brary contains 54,216 volumes of American and foreign medical literature and subscribes to 675 current American and foreign medical and other scientific journals. These books and journals are available daily from 8:30 A.M. to 10:30 P.M. for the students, nurses, staff, and medical profession.

Medical Care

ELBERT L. PERSONS, A.B., M.D., *Physician in Charge and Associate Professor of Medicine.*

With exceptions noted below, full medical and surgical care is furnished to all regularly matriculated medical students of the University who have paid the quarterly General Fee. This service is under the direction of the Physician in Charge with the co-operation of the Staff of Duke Hospital. It includes hospitalization (limited to thirty days), medical and surgical care, drugs, dressings, x-ray studies, and ward but not special nursing. A charge for board is made at the same rate as in the University dining halls. Refraction of eyes and treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernia, elective surgery, chronic skin conditions, endocrine disturbances, etc., or accidents or illnesses occurring during vacations or while off the campus are not included in this service. The cost of any necessary braces and orthopaedic appliances, as well as of special nursing must be borne by the patient. If the student has insurance providing hospitalization, surgical, or medical benefits, the benefits shall be applied to the cost of his medical care.

Student Government

The members of the student body elect an Honor Council, in which each class is represented. It is the duty of the Honor Council to hear all cases involving breaches of conduct on the part of members of the student body. All new students entering the School are required to comply with this system of government. The Council for 1953-54 is as follows: Chairman: J. M. Kelley, Jr.; Secy.-Treas.: J. D. Jones; Fourth Year Class: A. Thomas Craddock, J. E. Clement and M. S. Spach; Third Year Class: R. G. Deyton, Jr., D. E. Saunders, Jr., and P. C. Bennett, Jr.; Second Year Class: J. M. Sloan, III, J. H. Pollock and A. E. Deiss, Jr.; First Year Class: To be elected.

Curriculum of the School of Medicine



THERE is no summer quarter between the first and second years, but in the two clinical years the subjects of the autumn, winter and spring terms are repeated in the summer quarter. This accelerated schedule is optional, and students may take their first year, and three quarters in each of their subsequent years, and receive their certificates in four calendar years, or, if they receive permission from the Curriculum Committee, they may at the end of their second year take the clinical quarters given during the summers and receive their certificates in three and one quarter calendar years.

Every effort is made to emphasize the close relationship of preclinical and clinical instruction. Members of the clinical staff assist in the teaching of preclinical subjects and demonstrate to the students of the first two years patients whose conditions illustrate the subjects being taught. Thus, from the student's first days, he is impressed with the interdependence of all branches of medical science. In the junior and senior years, preclinical instructors assist the clinical staff in presenting the underlying basis of disease.

The free time in this curriculum may be spent in elective work or anything else the students wishes to do. No credits are given, but opportunity is provided for each student on his own initiative to obtain additional training which he may feel to be necessary or desirable. Elective courses have been organized for small groups, or the time may be utilized in independent work (including research) in any department, clinical or preclinical. Arrangements for taking such courses or doing other work are to be made through the Curriculum Committee.

It is hoped that many students will migrate to other medical schools for one or more quarters. Those who wish to do so, or to substitute a schedule different from that listed below, must have their programs approved in advance by the Curriculum Committee, and afterwards must present evidence that they have completed work comparable to that of the curriculum during the quarters in which they were away or were following an altered schedule.

OPTIONAL ACCELERATED SCHEDULE*

(The hours for these courses will be posted on the bulletin board.)

FIRST YEAR

29 September 1952 to 7 February 1953.

Anatomy (including histology and neuroanatomy)	617
Orientation	5
Psychobiology	16
Free Time	6

9 February to 13 June 1953.

Physiology	341
Biochemistry	279
Psychobiology	12
Free time	11

SECOND YEAR

AUTUMN QUARTER (4th):

5 October to 19 December 1953.

Pharmacology	143
Bacteriology	176
Parasitology	44
Public Health and Biostatistics	66

WINTER QUARTER (5th):

4 January to 20 March 1954.

Pathology	231
Public Health	66
Introduction to Medicine and Surgery	132

SPRING QUARTER (6th):

29 March to 12 June 1954.

Pathology	223
Introduction to Medicine	111
Clinical Microscopy	95

JUNIOR YEAR

SUMMER QUARTER (7th):*

6 July to 18 September 1954.

Medicine (Junior)	429
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AUTUMN QUARTER (8th):*

4 October to 18 December 1954.

Surgery (Junior)	429
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WINTER QUARTER (9th):*

3 January to 19 March 1955.

Obstetrics and Gynecology (Junior)	352
Psychiatry	77

SENIOR YEAR

SPRING QUARTER (10th):*

28 March to 11 June 1955.

Medicine (Senior)	390
Free time	39

SUMMER QUARTER (11th):*

5 July to 17 September 1955.

Surgery (Senior) including urology and orthopaedics	390
Electives	39

AUTUMN QUARTER (12th):*

3 October to 17 December 1955.

Pediatrics	297
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* The clinical instruction is repeated each quarter in order to utilize all the clinical material and to have small groups of students. Consequently, students may vary the order of the seventh, eighth, and ninth quarters, and also the order of the tenth, eleventh, and twelfth quarters. The above schedule merely illustrates the program of one group.

Surgery	41
Psychiatry	41
Preventive Medicine	11
Electives	39

SUMMARY

Total number of hours in curriculum	5,148
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MEDICAL HUMANITIES

The Course is given for one hour per week as an elective. The historical aspect of medicine as well as the ancillary medical disciplines are included in the series of lectures. Members of the various university departments as well as members of the legal profession and social agencies of the community participate in this program which is under the direction of George J. D'Angelo, M.D. Such a program is designed to give to the student some knowledge of the history of his profession and also to prepare him for the practice of medicine. The following general topics are presented:

<i>First Year:</i>	Society and the Physician History of the Basic Sciences
<i>Second Year:</i>	History of the Basic Sciences Religion and the Physician Hospital and the Physician
<i>Third Year:</i>	History of Medicine Hospital and the Physician Social Agencies in Medicine Medical Jurisprudence
<i>Fourth Year:</i>	History of Medicine Ancillary Social Agencies Medical Jurisprudence Medical Ethics and Economics

Requirements for the Degree of Bachelor of Science in Medicine

After the completion of six quarters in the Duke University School of Medicine, Duke University, on the recommendation of the Committee on Health Affairs grants the degree of Bachelor of Science in Medicine to medical students who have completed creditable investigative work, prepared an acceptable report of the investigation, and passed an examination upon the subject of the investigation before an advisory committee. Students who elect to undertake work toward this degree must obtain written permission from the Committee on Health Affairs after approval of their program by the head of the department

in which the work is to be done. No credit toward this degree is given for additional college work. All students in good standing are encouraged to undertake such investigative work as they may elect with the approval of the head of the department in which they wish to work. All requirements must be completed three months prior to the date on which the B.S. degree is requested.

Requirements for the Degree of Doctor of Medicine

The degree of Doctor of Medicine is conferred on those who have completed, to the satisfaction of the Committee on Health Affairs, the twelve quarters of 11-12 weeks each of the curriculum of the School of Medicine, the preclinical and clinical examinations, and have signed an agreement that they will spend at least two years of the succeeding three years in hospital or laboratory work acceptable to the Committee on Health Affairs. As a guarantee of this pledge the diploma is deposited in the Treasurer's Office until after the completion of this training. Failure to fulfill this agreement constitutes a waiver of any claim to possession of the diploma and the degree of Doctor of Medicine. At present, one half of the required period of approved hospital or laboratory training may be active duty in the Army, Navy or U. S. Public Health Service.

Admission



Application for Admission

APPLICATION forms may be obtained by writing to the Committee on Admission, Duke University School of Medicine, Durham, N. C. A check or post office money order for \$5, payable to Duke University School of Medicine, must accompany each request for an application. This is not refundable. If further information is required after the Committee has studied the completed application, a personal interview with the Committee on Admission or a Regional Representative is arranged for the applicant. The candidate then is notified as soon as possible whether he has been accepted or declined; if accepted, he must send a deposit of \$50 by a date which will be specified in the letter of acceptance but in no case prior to January 1 to insure enrollment. This money is applied toward the tuition. The next first-year class will be admitted October 4, 1954. Applications must be submitted prior to December 1 of the preceding year. Due to the large number of applicants to all medical schools, candidates are advised to apply to at least four schools. Special consideration will be given to the applications of those who may receive an acceptance from another school before hearing from their Duke application but who prefer to come to Duke. The number of students in each class is limited to 76, but only those students will be accepted who give promise of being a credit to the School and the medical profession. Women are received on the same terms as men. In the event of vacancies, students from other medical schools may be considered for admission to any quarter for which their previous training has fitted them. Each application for advanced standing will be considered upon its own merits.

Requirements for Admission

"I request that great care and discrimination be exercised in admitting as students only those whose previous record shows a character, determination and application evincing a wholesome and real ambition for life."—JAMES B. DUKE.

Intelligence and character are the essential qualifications for admission.

The minimum requirements for admission to this School include approved college credits of not less than ninety semester hours, which shall include adequate preparation in English, mathematics, physics,

biology, and chemistry. This preparation should be obtained in college courses of one-year duration, except in English and chemistry. In those subjects, two years are recommended. The second year in English should be chiefly composition and theme writing. The first year of chemistry should be general (inorganic), and the second, analytic and organic chemistry.

A premedical student should be aware of the importance of a well-rounded general education as a preparation for the study of medicine and not limit himself to scientific courses. He would be better advised to secure a knowledge of the principles and a thorough appreciation of the interrelations of the basic sciences than to accumulate credits in many courses. He should learn how to work independently, to observe critically, and to analyze, rather than simply store, the information presented. His choice of studies, beyond those required for admission, should be governed by his own chief interests and by the intellectual stimulus to be derived from the work. His major interest may be in any field, scientific or otherwise, and should provide an opportunity for the demonstration of his real ability. In general, he should avoid courses in subjects which are included in the medical curriculum.

The selection of students is based upon the quality rather than the quantity of preparation and upon demonstrated evidence of personal attributes of intelligence, character, and general fitness for the study and practice of medicine. In considering an applicant many sources of information may be consulted including (1) his curricular and extracurricular college record, (2) carefully prepared, confidential appraisals by teachers who know him personally, (3) his percentile rating on the Medical College Admission Test,* and (4) the results of an interview with members of the Admission Committee or one of its regional Representatives.

* This test is given at many of the colleges during the spring and autumn terms. If information is not available locally, it may be obtained from the Educational Testing Service, P.O. Box 592, Princeton, N. J.

Fees and Expenses



ALL FEES for each quarter are due and payable at the beginning of each quarter, and no student will be admitted to classes until these fees have been paid at the University Treasurer's Office. A fine of \$5.00 is charged for late registration. No credit will be given for any quarter in which the tuition has not been paid at the Treasurer's Office, whether the work has been done here or elsewhere, except that students who have been permitted by the Curriculum Committee to spend a quarter at another medical school or hospital may subtract the amount of tuition paid at this other medical school or hospital from that due here for that quarter.

It is not advisable for a student to attempt outside work to defray his expenses; the results usually are disastrous to his health and academic standing.

Fees and Expenses

Tuition, per quarter	\$300		
General Fee, per quarter, including Health, Commencement, and Diploma Fees	7.50		
Athletic Fee, not including Federal tax, optional, per year, payable in the autumn quarter	10.00		
Room-rent, per quarter* (estimated)	58.50		
Board, per quarter (estimated)	120	to	130
Laundry, per quarter (estimated)	10	to	20
Books, per quarter (estimated)	25	to	50
National Board of Medical Examiners, Fees† \$25 (Part I), \$20 (Part II)			
Microscope, ophthalmoscope, otoscope, and other equipment, which are required of each student and which must conform to rigid standards, may be obtained on a rental basis from the University, per quarter	45	to	65
Estimated total expenses, per month (including tuition)	190	to	250

* Information and the regulations about rooms in the Men's Graduate Center and Epworth Hall on the Woman's College Campus can be obtained by writing to the Duke University Housing Bureau, Durham, N. C. All dormitory rooms are occupied under the rules and regulations established by the University. Residence in University dormitories is not required. Rooms may be reserved by new applicants only if they have been accepted officially for admission to the University and if they have paid a room deposit of \$25 to the Duke University Housing Bureau. The initial room reservation deposit is effective for the period of continuous attendance. It will be refunded within 30 days after the student's graduation. Upon the withdrawal of an accepted applicant or of an enrolled student prior to graduation the deposit is refundable provided the Housing Bureau is notified at least 60 days prior to the beginning of the term for which the room is reserved. Students already in residence may retain their rooms for the succeeding quarter by applying to the Duke University Housing Bureau for confirmation of the reservation.

† Payable at the beginning of the quarter in which a student is eligible for the examination.

Departments of Instruction



*Anatomy**

The required courses of instruction in gross human anatomy, histology, and neurology are scheduled for five and one-half days a week for a period of eighteen weeks during the first year. Emphasis is placed upon the study of material in the laboratory. In an attempt to utilize more fully the laboratory time, visual educational methods are employed as fully as possible. These techniques consist of colored motion pictures of demonstration dissections, colored lantern slides, and motion pictures, both embryological and neurological. All of the instruction is designed to be as informal and as nearly individual as possible. General principles and the functional viewpoint of living anatomy are stressed in the hope that the student may be stimulated to secure a working knowledge of anatomy in the broadest sense. Whenever possible, fresh tissues and living cells are made available for examination, and clinical cases exemplifying anatomical principles are studied whenever they are available at appropriate times. Through the co-operation of the Department of Radiology, the students are given an opportunity to study portions of the living human body as revealed by the fluoroscope and roentgenograph. The following elective courses are offered:

Demonstrations in Anatomy. Using dissections already prepared, weekly demonstrations of selected regions or systems are made by the members of the group. Sixth quarter—Two hours per week by arrangement. Second-year students in groups of 10.

Review in Anatomy. During the sixth quarter, a review in anatomy will be presented by the visual education methods outlined above, covering gross and neuro-anatomy, and histology.

Special Neuro-anatomy. Laboratory work and conferences upon selected portions of the human central nervous system. Limited to 6 junior or senior students. Two hours weekly by arrangement.

Brain modeling. Free-hand reconstruction in clay, from gross and sectioned material, of the chief tracts and nuclei of the human brain stem. By arrangement—4 to 10 students.

Experimental Neurology. An operative and laboratory study of the effect of various lesions upon the central and peripheral portions of the nervous system. 4 to 8 junior and senior students by arrangement. Prerequisite—operative surgery.

* Staff members for the Departments, the Hospital, and Medical Service Courses are listed in the *Bulletin of the Medical School*.

Advanced Studies in Anatomy. These may be arranged at any time under the direction of the various members of the staff.

Review for Orthopaedic Anatomy. A one hour weekly review of the anatomy related to orthopaedic surgery.

Review for Surgical Anatomy. A one hour weekly review of the anatomy related to general surgery.

Biochemistry

The required course in general biochemistry for first-year students is given over a period of eighteen weeks during the first year. Two lectures, four laboratory periods, and one conference period per week are devoted first to the correlation of the fundamental facts and theories of physical and organic chemistry of proteins, fats and carbohydrates with the chemistry of living organisms; followed by an intensive study of the chemical aspects of the processes of digestion, absorption, circulation and respiration, acid-base and salt equilibrium, intermediary and over-all metabolism. Each student carries out on himself a fairly complete metabolism balance study involving quantitative analyses of blood and urine.

Since the success of the students in this course is largely determined by the adequacy and ready availability of their premedical training, it is urged that all students review the fundamental laws, theories, and facts of chemistry before the beginning of the course. A circular outlining the topics requiring special attention is sent to all students upon admission. Additional copies of the circular may be obtained from the Dean's Office.

Biochemical Research. The facilities of the department, including various types of research equipment and the clinical material of the blood chemistry laboratory, are available to properly qualified students for independent or supervised investigations. Chemical investigations of problems in biochemistry or in conjunction with the clinical and pathological departments may be carried on.

Chemistry of Proteins and Enzymes. A two-hour seminar is given weekly throughout the Autumn, Winter and Spring Quarters.

Physical Biochemistry. A two-hour lecture course with demonstrations, given weekly in Autumn and Winter Quarters. Given alternately with *Chemistry of Proteins and Enzymes*.

Intermediary Metabolism. A two-hour lecture course and seminar conducted during Autumn, Winter and Spring Quarters. Given alternately with *Seminar in Nutrition*.

Advanced Seminar in Nutrition. A two-hour lecture and seminar course in modern nutritional concepts. Given alternately with *Intermediary Metabolism* during Autumn Quarter.

Biochemistry of Disease. A seminar course meeting once weekly to discuss etiology and pathogenesis of metabolic diseases from the biochemical viewpoint. Given in alternate years in the Spring Quarter.

Physiology and Pharmacology

The course in medical physiology for first-year students is given over a period of eighteen weeks during the first year. There are lectures, laboratories, and conferences each week in which are presented the general principles of human physiology and their general application to the practice of medicine. This course runs parallel to biochemistry.

The course in pharmacology is given in the first quarter of the second year. Lectures, laboratories, and conferences deal with the mode of action of drugs in terms of biochemical and physiological processes.

Physiological and Pharmacological Research: The facilities of the department include modern types of research equipment. There are special facilities for research in the field of respiration; circulation; and cellular metabolism. Properly qualified students are permitted to undertake original research in physiology and pharmacology under direction of various members of the staff.

Seminars in special fields of physiology are offered to graduate students by various members of the staff.

Microbiology

Bacteriology, Immunology, and Mycology. The required course is given in the fourth quarter. An intensive study is made of the common bacteria, fungi, and viruses which cause disease in man. The scope of the laboratory course is reasonably wide and acquaints the student with all the methods and procedures employed in bacteriological laboratories. Most of the lecture time is devoted to the immunological and epidemiological aspects of infection. The instruction is designed to give the students a clear conception of: (1) how organisms gain entrance to the body, (2) the type of poisons which they produce, (3) the nature of immune bodies which are produced by the host, and (4) the methods of preventing the disease by active and passive immunization.

Research Bacteriology. Opportunities for original investigations are afforded a few specially qualified students.

Clinical Bacteriology. During their clinical clerkships on medicine (one quarter each for junior and senior classes), the students may perform the routine and special bacteriological work for the patients assigned to them on the teaching service, under the direction of the

Department of Bacteriology and in parallel with the Biological Division of the medical clinic.

Pathology

General Pathology. The course in general pathology is given during the fifth and sixth quarter of the curriculum, following completion of the prerequisite courses in anatomy, physiology, biochemistry and bacteriology. All the work of the class is done with small groups, each under the guidance of a senior instructor and his junior assistant. The histological aspects of the pathological processes are studied coincidentally with the gross anatomical and physiological alterations of the tissues, thus maintaining a unity of conception of disease. As the various pathological processes and the diseases arising from their elaboration are studied by the student groups, assignments involving reports on the study of groups of cases are made to individual students. The group work and the individual student reports are supplemented by weekly conferences involving the class as a whole and dealing with problems presented by current autopsies and with other problems of general importance. Student collaboration in post-mortem studies is required. Cases thus studied are presented by the student before the class under the direction of the staff; this takes the form of a clinical-pathological conference in which each student plays a particular role.

Elective Courses. Special courses in pathology are given to students who have completed the course in general pathology. These courses are available through special arrangement.

Clinical-Pathological Conference. A weekly clinical-pathological conference for advanced study is held on Saturdays. It is open to all persons interested, but is designed especially for the Hospital and Medical School Staff. Attendance by all the students is encouraged but is optional. Miscellaneous weekly pathological conferences dealing with current cases under treatment on the various services are held for instruction of the staffs concerned.

Student Research. Research facilities are provided for competent students. Those who show an interest in investigative work are given every encouragement and are allowed to work independently or in collaboration with the staff.

Postgraduate Instruction. The staff of the department is composed of senior nonresident and junior resident members. The junior resident staff consists of interns, assistant residents, and a resident; all of these are active teachers as well as advanced students of disease. Ample opportunity for the development of a career in the field of pathology is provided for these men.

Medicolegal Instruction. The department works in close cooperation with the local coroner's office. Special medicolegal investigation

for others are undertaken from time to time. The department collaborates with other departments of the Schools of Medicine and Law in a course in legal medicine that is given in alternate years.

Medicine

Introduction to Clinical Medicine and Physical Diagnosis. This course is initiated, in the fifth quarter, by introductory lectures, case discussions, and instruction in the methods of physical examination and history taking. Early in the course students begin work at the bedside in the examination of selected patients. Emphasis throughout is placed on instruction individually or in small groups. The interpretation and pathogenesis of all abnormal findings are stressed. The Departments of Neurology and Psychiatry provide training in neurological and mental examinations. This plan of teaching continues in the sixth quarter, when, in addition, instruction in the more specialized methods of examination is provided through the co-operation of the Departments of Surgery, Obstetrics, Gynecology, and Radiology.

Clinical Microscopy is given in the fifth quarter. The course includes the essentials of hematology and the examination of fresh material, such as urine, stools, spinal fluids, sputum, transudates, and exudates. The most important parasites of man are studied by the use of fresh and museum material. Second-year and senior students are given opportunities for special work and for investigation. This course is supplemented in the Junior and Senior years by Hematology Conferences, which are held weekly, and Ward Rounds, which are held three times weekly.

Cutaneous Medicine and Syphilology. Instruction consisting of lectures, seminars, the study and treatment of patients in the out-patient clinics, and on the wards is offered as an elective course.

Junior and Senior Medicine. The medical students are assigned to the medical wards as clinical clerks for three quarters of their time and to the medical out-patient department, where they examine patients, for the other part of their time.

Psychiatry

Instruction starts in the first year with an introductory course in psychiatry. In the second year, methods of psychiatric examination and a general presentation of the main reaction types are given. Each third-year student has a two-week clerkship on the psychiatric ward, and in the fourth year patients are worked up in the out-patient clinic for a period of three and half weeks. A psychiatric amphitheater clinic is held weekly throughout the year for third- and fourth-year students. Elective courses in psychiatric methods of research, physiological

aspects of psychiatry, psychosomatic medicine, psychoanalysis in medicine, and principles of psychotherapy are offered to fourth-year students. Students are invited to attend the staff case conferences, the psychosomatic conferences and the conferences on psychiatric disorders of childhood. Emphasis is placed upon the close relationship of psychiatry to other branches of medicine and the social sciences. Internships are available in psychiatry with the expectation that they will lead to progressively greater interest in psychiatric problems encountered on all other services in the Hospital. Graduate training in psychiatry meeting the requirements of the American Board of Psychiatry and Neurology is given. Regular courses in conjunction with the Veterans Administration Hospital training program are available. Investigation is encouraged.

Surgery

General Surgery. In the sixth quarter the students, during their course in physical diagnosis, attend clinics and demonstrations arranged to familiarize them with the techniques of examinations and diagnostic procedures used in general surgery and the surgical specialties. They also have the opportunity in this quarter to become familiar with certain basic principles in aseptic and atraumatic surgery and in isolation technique. The *junior* students, during their surgical quarter, attend ward rounds in surgery and the surgical specialties, act as clinical clerks on the wards and assist in the operative treatment of patients assigned to them. The surgical students in the *senior* year attend ward rounds in general surgery and the surgical specialties in the mornings and assist in the surgical out-patient clinics in the afternoon. Also in groups of two for the proportionate time available they are assigned to the emergency division of the out-patient clinic where they assist in the diagnosis and care of urgent conditions.

A six days' concentrated course of training in the administration of anesthetic agents is open to twenty-four medical students each school quarter. Properly qualified students observe and administer anesthesia under direct supervision of staff anesthetists.

Otolaryngological Division. An introductory course of instruction in the use of otolaryngological instruments, with a review of normal anatomy, is given to second-year students in the sixth quarter. Clinics during all quarters of the year are given to junior students; students during their surgical quarter work in the otolaryngological out-patient clinic as assigned. Ward rounds are held separately each week for third- and fourth-year students. Patients are assigned to junior students during the surgical quarter.

Ophthalmological Division. During the sixth quarter second-year students receive instruction in elementary ophthalmology. During the

senior pediatric quarter the students work in the ophthalmological out-patient clinic as assigned, and assist in the study and treatment of eye diseases. Especial emphasis is placed on the underlying medical and surgical conditions. Each student follows throughout his time in the out-patient clinic all patients assigned to him. For those who manifest an unusual interest in this specialty, provision will be made for more advanced work. Throughout the senior surgical quarter the students attend ophthalmological ward rounds for one hour each week. During either their third or fourth academic year clinics covering the more general neuro-ophthalmological and medical problems are given.

Orthopaedic Division. In the sixth quarter an introductory course is given. During the surgical quarters the junior and senior students attend weekly ward rounds of one hour each in orthopaedics and fractures. Students in their senior surgical quarter are assigned in rotation to the orthopaedic out-patient clinic. These students also attend orthopaedic staff rounds at 5:30 P.M. Mondays through Fridays. An elective course in the treatment of fractures, limited to three students, is offered during the junior and senior surgical quarters. An elective course in physical therapy is also offered during these quarters. Arrangements may be made for students who so desire to do research or experimental work. They may also attend the state orthopaedic clinics as held.

Urologic Division. In the sixth quarter, second-year students are given a course of lectures and practical demonstrations in urologic physical diagnosis in the normal individual. Ward rounds on urologic patients are given every Saturday at 8:30 A.M. for third- and fourth-year students in their surgical quarter. Small groups are selected from the senior surgical group of students and assigned in rotation to the urologic out-patient clinic. During one quarter of the year, urologic clinics are given weekly for the junior and senior classes. These clinics deal with the affections of the male and female urinary tract and of the male genital tract. Clinics for urethroscopic and cystoscopic investigation and for the more technical methods of urologic diagnosis and treatment are held Monday, Wednesday, and Thursday from 1:30 to 5:00 P.M. and Tuesdays and Thursdays from 9:30 A.M. to 12:30 P.M. throughout the year. X-ray conferences on all urologic cases are held Tuesday, Thursday, and Saturday mornings from 8:30 to 10:00 and are followed by staff rounds. Three senior students may select one of these cystoscopic clinics, x-ray conferences, and staff rounds as an elective. *The Urologic Journal Club* meets each week, and members of the staff review their respectively assigned journals. Interested students are welcome. Urologic pathology conferences are held twice a month throughout the year with the cooperation of the Pathology Department.

Division of Plastic, Maxillo-facial, and Oral Surgery: Didactic lec-

tures are given to both the third- and fourth-year students to familiarize them with the basic principles of plastic, reconstructive, and destructive procedures. Bedside ward rounds and demonstrations are held twice weekly to illustrate these basic of trauma, disease, and reconstruction. Both private and public patients are assigned to students during the surgical quarter. Fourth-year students work in the Plastic Surgical Clinic which meets daily, with special reference on Wednesday which is the Plastic Surgical and Oncology return or follow-up day. Opportunity is afforded interested students to observe moulage and cast work, cosmetic restoration of color, the making of prosthetic appliances, etc. The Oral Surgical Clinic has three dentists and oral surgeons in attendance and is in operation five and one-half days each week. Associated closely and allied with the plastic surgical service, is the Medical Speech Pathologist and Audiologist, who has charge of the Speech Correction Program.

The Division of Medical Speech Pathology will work in close cooperation with the Division of Plastic and Oral Surgery, the Division of Otolaryngology, and the Departments of Pediatrics and Psychiatry. Weekly lectures are given to familiarize students with the various types of speech defects and abnormalities which are encountered in both children and adults. The pre and postoperative followup cleft palate patients are seen and evaluated each Wednesday afternoon in conjunction with the Plastic Surgical Clinic. Clinics will be arranged as desired with other departments. Speech instruction and therapy are given daily by appointment.

Neurosurgical Division. During all four quarters, separate weekly ward rounds are held for the junior and senior surgical groups. Emphasis in these rounds is placed upon the recognition of neurosurgical problems, followed by observation of the operative and post-operative procedures. Weekly x-ray and pathological conferences are held, and these may be attended by interested individuals. Tumor clinic conferences are held bi-monthly, on each second and third Thursday of the month.

Division of Thoracic Surgery. During the academic year ward rounds, lectures and demonstrations are held to acquaint the third- and fourth-year students with the principles and practice of surgery of the chest. The anatomy and physiology of the respiration and circulation are reviewed and their application to thoracic surgery is stressed. X-ray diagnosis is emphasized and frequent pathology conferences are held to give the students a well-rounded knowledge of the surgical diseases of the chest.

Dentistry. Second-year students, in the sixth quarter, are instructed in the principles of dentistry.

Division of Anesthesiology. Junior students, during their surgical quarter, are given a series of eleven lectures by the medical anesthesiol-

ogists. Following a brief history of anesthetic drugs, the response of the body to such drugs is discussed. The physiological basis of the reactions encountered in the operating room is stressed and the rational for choice of agents for various patients is presented. A six day's concentrated course of training in the administration of anesthetic agents is open to twenty-four senior medical students each school quarter. These students observe and administer anesthetics under the supervision of staff anesthetists.

A two- to three-year residency training program in Anesthesiology is available for physicians who are graduates of a Class A medical school and who have completed an internship in an accredited hospital. This is an approved residency which after two years qualifies the resident to take the American Board examinations. Applicants are accepted January 1st and July 1st. Opportunities are provided to employ all the varied techniques and agents utilized in anesthesia. Emphasis is placed on knowledge of the various diagnostic and therapeutic nerve blocks, and opportunity is provided to learn the standard regional nerve block procedures. Facilities are available for clinical and experimental research. Seminars are held twice a week for theoretical instruction and review of interesting cases and journals.

Courses available to graduate nurses include an eighteen months' course for nurses who have had no experience in anesthesia, and a nine to twelve months' course for nurses who have had five years of practical experience but no formal training in the specialty. Instruction embraces the theoretical aspects and clinical application of all drugs and techniques in accepted usage. The program is divided into quarters. The major part of the basic theoretical instruction is given during the first three quarters. After a pre-clinical period of eight weeks, clinical practice runs parallel with the theoretical program. One class is accepted annually and enrolled on January 15. All appointments for the current year are made by September 1 of the preceding year. Graduates of these courses are eligible to take the examination given by the American Association of Nurse Anesthetists. Tuition is \$150.00 and \$100.00 respectively. Additional information concerning these programs for nurses may be obtained from Mary B. Campbell, R.N., Box 3094, Duke Hospital, Durham, North Carolina.

Radiology

The student teaching schedule in roentgenology consists of a course in roentgen diagnosis and a course in therapeutic radiology. The first is offered during each scholastic quarter on Tuesday and Thursday of each week. The fundamental physics of x-ray is discussed, with the chief emphasis being placed upon the anatomical, pathological and physiological bases for the interpretation of x-ray films. The course

is conducted in seminar fashion and no formal lectures are given. The students participate in and lead discussions with the instructor serving as the moderator. An attempt is made to acquaint the student with the aids of roentgenology in diagnostic problems. The correct use of x-rays in diagnosis is stressed.

Therapeutic radiology is given one hour weekly during each quarter. At these sessions the general problem of the treatment of benign, inflammatory and malignant lesions by x-ray and radium is discussed and the accepted views of the combination of these therapeutic agents with surgery is stressed. Representative cases are demonstrated, and the follow-up results are particularly stressed.

A limited number of senior students are permitted to attend routine film reading sessions in the Department of Radiology. They are also instructed in the fundamentals of fluoroscopic examinations and shown the many pitfalls of the inexperienced fluoroscopist.

X-ray conferences are scheduled with each specialty in the X-ray Conference room with weekly schedules. All x-ray cases on that service the preceding week are shown and briefly discussed for benefit of the house staff and attending students. At the present weekly conferences including the Ear, Nose and Throat, Orthopaedics, Neurosurgery, Thoracic surgery, Pediatrics, Cardiac, Gastro-intestinal, Urology are held and used as part of the teaching program. Tuesday and Friday afternoons special x-ray conferences of x-ray pathology are held. X-ray Pathology conference 5 to 6 P.M. each Wednesday afternoon is given in the autopsy room."

Each Thursday afternoon and Wednesday evening a conference is held by the members of the x-ray staff and visiting radiologists. Difficult cases are brought up for discussion and diagnosis.

Obstetrics and Gynecology

Second-year students receive seventeen hours of instruction in the fundamentals of obstetrics and gynecology during their course in physical diagnosis in the sixth quarter. Clinics and demonstrations for junior and senior students are held on Saturdays at 10:30 A.M. during the Autumn, Winter, and Spring Quarters and on Mondays at 11:30 A.M. in the Summer Quarter. During one quarter of the *junior* year each group of students attends ward rounds at 8:30 A.M. on Mondays, Wednesdays, and Saturdays; preoperative conferences at 8:30 A.M. on Tuesdays and Fridays; and the out-patient clinic at 1:30 P.M. five times weekly, for nine weeks. They also attend an endocrine clinic once a week for nine weeks during the junior year. The students also spend part of each day on the wards. *Senior* students, during their surgical quarter, have ward rounds on obstetrics and gynecology on Saturdays at 8:30 A.M.

Elective courses in the diagnosis and treatment of obstetric and gynecological conditions are offered for junior and senior students.

Pediatrics

Junior and senior students, during their medical quarters, have pediatric ward rounds one hour each week. These junior students receive instruction in introductory pediatrics and the physical diagnosis of infants and children. The senior students are divided into three groups, each of which spends one quarter in pediatrics. During this quarter they are assigned in rotation as clinical clerks on the children's ward, in the nursery, pediatric out-patient department and the well-baby clinic. Students may attend on a voluntary basis the special pediatric clinics—nephritis, cardiac, allergy, convulsive disorders and chronic pulmonary disease. In addition to ward rounds, a weekly staff conference and daily out-patient teaching clinics, special conferences are devoted to normal growth and development, pediatric roentgenology, practical aspects of pediatric nursing procedures and the preparation of diets for infants and children. Under the supervision of the Social Service Department, students visit homes to investigate the social, environmental and family aspects of disease in certain of their patients. Elective courses: Senior students may spend two weeks in general practice with Instructors in General Practice. In addition to the six pediatric internships, there are four in which six months each are spent in obstetrics and pediatrics for graduates who plan to enter general practice. Seven assistant residencies and one residency are available.

Preventive Medicine and Public Health

Preventive Medicine and Public Health. In the freshman year there are four lectures given to provide some basic orientation predicated upon the fact that disease has a community as well as a personal aspect and that the social component of illness is an important force in the work of the doctor as well as in the life of the community. The student is introduced to disease as a mass or community problem and to medicine as a social institution.

In the sophomore year there is a series of lectures and discussions, totaling fifty-two hours, which outline in some detail the interrelationships between medicine and society. This course attempts to provide an understanding of the general principles governing the circumstances under which disease occurs and also the general principles used in the development of measures aimed at the control of disease, both communicable and non-communicable. The effect of the physical environment on human health is briefly discussed with special emphasis on the relationship of the practicing physician to environmental control

programs and policies. An overview is given of the basic health problems at the various stages of life.

In alternate years, the senior and junior students meet together for eleven one-hour sessions. These sessions are devoted to discussions of the application of the principles of preventive medicine as they can be applied by the physician in private practice. Attention is also directed to the role of community health and welfare agencies as adjuncts to the physician in the management of his individual patient. The care method of presentation and study is used, with groups of students acting as the panel of experts.

Medical Parasitology. This is a lecture and laboratory course given one morning a week in the fourth quarter. Most of the emphasis is placed on the symptomatology, diagnosis and therapy of the various helminthic and protozoal diseases in man; several periods are devoted to medical entomology.

Legal Medicine Toxicology

This course embraces a discussion of the relation of physicians to legal criminal procedures, jurisdiction of the coroner and medical examiner, laws governing the dead human body, personal identity of the living, and the dead, the medicolegal autopsy, traumatic injuries and fractures, rape, abortion, asphyxial death, homicidal, suicidal, and industrial poisoning, alcoholism, the examination of blood, stains, fibers, and the detection of malingering. This course is open to junior and senior students and is given in alternate years. Discussions of medicolegal problems for the house staff and senior students, and joint conferences of the medical and law students also are held.

Undergraduate Cancer Training Program

(Supported by a grant in aid from the U. S. Public Health Service)

During the first quarter, a course in surgical pathology is available to interest senior students. Classes are held twice weekly; each class is two hours. The sessions are informal. Gross and microscopic materials with clinical abstracts are readily available. Clinico-pathological correlation is stressed throughout the course.

During the second and third quarters, weekly seminars are held on various phases of the tumor problem. Clinico-pathological correlation is stressed as the viewpoints of the clinician, radiologist, and pathologist are presented. General practitioners, members of the clergy, the social service division, and nursing staff are invited to discuss certain aspects in the care of patients with neoplasms.

In addition, the Undergraduate Cancer Training Program staff participates in the teaching of neoplasia to the sophomore students.

This is done as a supplementary program to the students as they are being taught the principles of neoplastic disease by the Department of Pathology. New material is presented to them, and here the clinico-pathological approach to the problem of neoplasia has special emphasis. In this phase of the program those regions of the body in which the frequency of tumors is highest are selected for study.

The Program, through its secretarial and social service personnel and its follow-up studies, is a valuable adjunct in the clinical training of the students. Contact is maintained with discharged patients and regularly scheduled appointments are made for their return visits to the various outpatient departments for periodic evaluation and indicated therapy. The program maintains an active tumor registry and, through the secretarial staff, this information is made available for study of particular phases of the tumor program.

Staff of Duke Hospital



Internships and Residencies

Straight internships of one year duration are available in Medicine, Surgery, Obstetrics-Gynecology, Pediatrics, Psychiatry and Pathology. Mixed internships are available in Obstetrics and Pediatrics. A stipend of \$25 per month is offered in Medicine, Surgery and Pediatrics plus room, board, laundry and uniforms. An allowance of \$12.50 is paid to married house officers in lieu of a room in the house staff quarters. Appointments are from July 1 through June 30, although special arrangements can be made with individual department heads.

Assistant Residencies and Residencies are available in the following services: internal medicine (allergy, cardiovascular diseases, dermatology-syphilology, gastroenterology, neurology, and pulmonary diseases), surgery-general (neurology-surgery, ophthalmology, orthopedic surgery, plastic surgery, thoracic surgery, urology, oral surgery) pediatrics (pediatrics and obstetrics), obstetrics and gynecology (endocrinology), psychiatry, anesthesia, pathology, and radiology.

Application forms for all internships may be obtained by writing to the Superintendent, Duke Hospital, Durham, North Carolina. Graduates of any Class A medical school are eligible for internships. Appointments are open to women and to graduates of foreign medical schools. Duke Hospital participates in the National Intern Matching Program, Inc.

After completion of an internship in Duke Hospital or in another acceptable hospital, a certain number may be appointed as assistant residents in the above listed specialties plus Biochemistry, the Student Health Service or as fellows of the Private Diagnostic Clinics at a salary of \$250 to \$800 per year plus maintenance. A smaller number may be eventually promoted to the residency in the above listed services at an annual salary of \$500 to \$1300 per year plus maintenance. Application should be made to the head of the department concerned.

The Hospital and School of Medicine are an integral part of the Duke University campus, and its educational, recreational and athletic facilities are available for the Resident Staff.

The Veteran's Hospital opened on April 6, 1953 and located within walking distance of Duke Hospital, is integrated with the Duke Hospital house staff training program. House officers on certain services may be assigned to either hospital for parts of a year. Administratively, the hospitals are separate but educationally they are closely

integrated. The Medical Staff of the Veteran's Hospital is supervised by a Dean's Committee composed of faculty members of the Duke School of Medicine. Certification of training is provided by Duke Hospital.

Postgraduate Study

Graduates in medicine are welcomed at the various clinics and demonstrations in medicine, surgery, obstetrics, and other specialties, which are held from 9:30 A.M. to 12:30 P.M. each Saturday, as well as at the daily ward-rounds in the mornings, and the out-patient clinics in the afternoons. They can start at any time and remain as long as they wish. Additional special work in any department for a period of not less than three months may be arranged by consultation with the head of the department concerned. A certain number of residencies also are available at Duke Hospital in medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry, neurology, dermatology, orthopaedics, urology, otolaryngology, ophthalmology, roentgenology, pathology, and biochemistry. Further information can be obtained by writing to the Dean.

Returning veterans are requested to register on arrival at the Dean's office, and with Mr. Oscar Petty, Jr., 303 Administration, who will assist them in applying for Veteran's benefits.

Medical Service Courses at Duke Hospital



Hospital Administration

Eight internships in hospital administration leading to a certificate are available to university graduates whose character, tact, and ability for leadership are good, and whose academic standing is high. These internships are of two years' duration and pay a small salary in addition to room, board, and laundry. Vacations of two weeks are allowed during each year of internship.

The instruction is practical rather than theoretical in emphasis. The interns are rotated through seven different assistant administrative positions in the Hospital. There is also a weekly seminar lasting two hours and two classes lasting one hour each during the week.

The interns may register in the Graduate School of Duke University, and receive the A.M. degree after the successful completion of a thesis and twenty-four semester hours of university courses in various fields. This additional work will add one year to the program. Further information may be obtained by writing to the Superintendent, Duke Hospital, Durham, N. C.

Nursing

Practical Nursing Division of the Vocational Education Department of the Durham City Schools, Duke Unit: After three months of classroom instruction at the Hillside High School, nine months are spent in classes and practical training at Duke Hospital. At the completion of this course, the student receives a certificate in practical nursing and is eligible for licensure as a practical nurse in North Carolina.

School of Nursing: Information may be obtained by writing to the Dean of the School of Nursing, Hanes House, Duke University, Durham, N. C.

Dietetics

In addition to the dietetic training of the students of the Schools of Medicine and Nursing, fourteen dietetic interns may be admitted to the School of Dietetics and given the certificate of graduate dietitian

after the successful completion of one year's internship. The entrance requirements are a Bachelor's degree from an approved university or college, with majors in nutrition and institutional management, and the courses in chemistry, biology, social science, and education recommended by the American Dietetic Association. The course for dietetic interns provides instruction in all phases of hospital and institutional dietetics, including experience from the buying and storage of food to its service to the patients according to the physician's orders. Interns may apply some of their time in securing graduate credit.

The course starts the first of September. All students pay a registration fee of \$10 at the time of appointments. Additional fees are charged if the intern takes additional work in the University for an advanced credit. Maintenance is provided. More detailed information and application blanks may be obtained from the Professor of Dietetics, Duke University School of Dietetics, Durham, N. C.

Social Service

Medical and psychiatric social casework service is offered to patients referred by personnel within the Hospital, and by interested individuals and health and welfare agencies outside of the Hospital. Assistance and advice in connection with the problems presented are available to the members of the Staff and referring agencies.

The division also assists in teaching social and environmental aspects of illness and medical care through consultations and lectures to the students of the Schools of Medicine and Nursing. In addition, it serves as an agency for supervised field work for students of the Graduate School of Social Work of the University of North Carolina. Further information concerning training for advanced students may be obtained from the Social Service Division, Duke Hospital, Durham, North Carolina.

Laboratory Technique

The course in laboratory technique, which includes training in blood chemistry, clinical microscopy, bacteriology, serology, basal metabolism, etc., is approved by the Registry of Technicians of the American Society of Clinical Pathology. The course lasts twenty-one months, the next class starting September, 1953. The registration fee is \$300 which includes tuition, student health and diploma fee for the entire course. There are no additional fees except for breakage. Other student activity fees are optional. The students live in town at their own expense. A minimum of two years of approved college work is required. The degree of B.S. in Medical Technology is awarded upon successful completion of the course. Information as to the

specific requirements may be obtained from Dr. Haywood M. Taylor, Duke Hospital, Durham, N. C.

X-Ray Technology

The course in x-ray technology includes training in radiographic and x-ray therapy technic. The curriculum has been planned with the thought of giving the student x-ray technician a basic knowledge of the principles involved along with an introduction to the technical aspects of radiography. Applicants for training in x-ray technology should satisfy one of the following requirements: two years of college, graduate nurse, or special student without either of these requirements who might be appointed by the committee on admissions. The course is of twelve months' duration and the following subjects are presented: Anatomy and Physiology, General and Radiographic physics, Processing and Chemistry of x-ray film and Solutions, Fundamentals of Exposure Factors, Medical Terminology, Standard and Special Positions in Radiography, X-Ray Protection and Apparatus Maintenance. The tuition fee is \$25.00 payable on admission. Other student activity fees are optional. The University educational, recreational and athletic facilities are available to the students. Students are admitted on October 1 each year. Applications should be filed by July 1st. No maintenance is provided, therefore students live in town at their own expense. A certificate is awarded to those who successfully complete the course. The course is approved by the Council on Medical Education, American Medical Association, American College of Radiology, American Registry of X-Ray Technicians and The American Society of X-Ray Technicians. For further information, write: Professor of Radiology, Duke Hospital, Durham, N. C.

Physical Therapy

A fifteen months' course in physical therapy is offered for men and women graduates of accredited schools of physical education and nursing, and for selected applicants who have completed ninety college semester hours, including credit in the biological sciences, physics, chemistry and psychology. The curriculum provides instruction in anatomy, physiology, kinesiology, pathology, psychology, electrotherapy, neuropsychiatry, therapeutic exercise and the principles of rehabilitation. Instruction in the clinical subjects is given by members of the faculty of the School of Medicine. Clinical training will be given at Duke Hospital and affiliated institutions and includes supervision of orthopaedic problems in the Durham Public Schools. The course starts in October. The tuition fee is \$350 plus \$35 for medical fee, and does not include maintenance. A certificate is awarded upon

successful completion of the course. Twenty hours of credit may be earned toward the baccalaureate degree.

In addition to the above, a six months' course in the Psychosomatic Aspects of Physical Therapy is given to registered graduate physical therapists. The course includes a study of personality structure, adjustment, tensions, anxiety and their relation to patient behavior and management. The tuition fee is \$150.00. A certificate is awarded. Courses are given to the students of the Schools of Medicine and Nursing. Further information and application blanks may be obtained from the Division of Physical Therapy, Duke Hospital, Durham, N. C.

Occupational Therapy

Occupational Therapy in the form of creative, manual, educational and recreational activities is offered to patients upon referral by their physicians. These activities are adapted to the specific remedial need of the individual patient. The division serves as a clinical training center for students from Occupational Therapy Schools.

Medical Record Library

A twelve months' course for the training of medical record librarians which has been given full approval of the American Association of Medical Record Librarians and the American Medical Association, includes three months of classes and nine months of internship with rotation through inter- and extra-departmental stations. Applicants are judged individually for eligibility, and education, training, and experience are all taken into consideration. The curriculum provides instruction in the theory of medical record library science, and an introduction to anatomy, physiology, pathology, medical and operative terminology, and medical diction. Instruction is given by members of the faculty of the School of Medicine, with special lectures on hospital management and correlation of various hospital departments, as well as seminars on legal aspects and administrative uses of medical case records. Internship includes application of class work in actual practice and covers all phases of medical record library work. The course starts in October. The tuition fee is \$175.00 and does not include maintenance. A certificate is awarded upon successful completion of the course. Applications may be made to the Medical Record Librarian, Box 3307, Duke Hospital, Durham, N. C.

Medical Art and Illustration

The function of this Division is to produce, for staff members allied to medicine, visual aids by way of various art and photographic meth-

* Member of Chartered Society of Physiotherapy, England.

ods. These visual aids are used to enhance the medical records and to aid in research and education. Services offered by this Division are:

1. Medical Art: Illustrations, by means of various artistic techniques, depicting anything perceptible to the eye, the existing but unseen and even the theoretical, as well as mechanical drawings, diagrams, charts, graphs, lettering, casts, models, exhibits, etc.
2. Medical Photography: Illustrations of anything to which available photographic equipment will respond. This Division produces still and motion pictures, microphotographs, pictures of the retinae, photographic copies, film strips, lantern slides, enlargements and contact prints. Services offered directly for the patients' benefit are: Production of various types of anatomical prostheses and instruction in the use of opaque cosmetics. Facilities for individual training in specific techniques or methods employed by this Division are available. No academic credit is given. Prerequisites, tuition, time and type of training are determined by the Chairman of this Division. No regular courses of instruction in medical art and photography or their allied fields are offered.

THE SCHOOL OF NURSING

Fall Semester begins September 23, 1954

The School of Nursing



THE School of Nursing offers two programs; a three-year program leading to a diploma in Nursing and a four-year program leading to the degree of Bachelor of Science in Nursing. Graduates from these programs are eligible to take the State Board Examination for the title of Registered Nurse. The Division of Nursing Education of Duke University offers to graduate nurses a program leading to the degree of Bachelor of Science in Nursing Education. This division is closely associated with the School of Nursing and the program is described in this bulletin, but admission is through the Woman's College.

The courses leading to the diploma are designed to provide an educational program enabling the students to develop skills, knowledge, and attitudes needed for nursing service in hospitals and homes. Included in the program are experiences in the classroom, in the laboratory, and in Duke Hospital. Students in this program participate in general campus activities and share with other undergraduates opportunities for personal development. Students who wish to work toward the diploma in Nursing must apply for admission to the School of Nursing of Duke University.

Students in the program leading to the degree of Bachelor of Science in Nursing have the opportunity to secure a background of knowledge and appreciation as well as skills and attitudes which aid them in interpreting their experiences in nursing. Included in this program are classroom and laboratory experiences with the students in the colleges and clinical experience in nursing with the students and personnel in Duke Hospital and other community agencies. Students in this program are prepared for nursing in hospitals and home and in public health nursing. Graduate nurses are not admitted to this program. Students who wish to work toward the degree of Bachelor of Science in Nursing apply for admission to the School of Nursing of Duke University.

The program leading to the degree of Bachelor of Science in Nursing Education is planned for nurses holding a diploma in Nursing who wish to prepare themselves as teachers in schools of nursing or administrators in nursing service. Students who wish to work toward the degree of Bachelor of Science in Nursing Education must apply for admission to the Woman's College of Duke University.

Admission



Application for Admission

APPPLICATIONS for admission to the School of Nursing should be made to the Committee on Admissions of the School of Nursing, Hanes House, Duke University, Durham, N. C. Application forms will be sent on request.

Admission

Applicants may qualify for admission to one of the two programs in the School of Nursing as members of the Freshman Class, as students with advanced standing, or as members of the first year of the diploma program. Since the profession of nursing requires women with a high sense of integrity and responsibility, with culture and intelligence, whose predominant interest is service, the Admissions Committee will select the applicants who, in its opinion, seem best qualified for nursing. The Admissions Committee must have on file the records indicating the fulfillment of the following requirements before considering an applicant.

1. Graduation from high school with sixteen units of credit as indicated.
2. Aptitude and achievement tests.
3. Three recommendations.
4. Interviews.
5. Physical and dental examination.
6. Transcript of college courses for those who have attended college.

Specific Requirements

1. All applicants for admission to the School of Nursing must present at least sixteen acceptable units of secondary school credit. A unit of credit is allowed for a course of study pursued throughout an academic year at an accredited secondary school, if the course has been completed satisfactorily.

1. Twelve units must be in English, foreign language, history and social studies, mathematics, and natural science; and must include:
 - (a) English—3 units.

(b) Algebra—1 unit.

(c) Plane geometry—1 unit.

2. The four remaining units are elective and may be selected from those subjects for which the school allows credit toward graduation; but it is recommended that they also be selected from the five subject fields listed above.

Other units offered in subjects not included in this list will be considered for acceptance on the basis of full statements transmitted with the applicant's record from the school recommending her.

II. Satisfactory scores on a battery of aptitude and achievement tests.

III. Three recommendations, two of which must come from recent high school or college instructors.

IV. Interviews with two members of the Duke University School of Nursing faculty, whenever possible.

V. Records of recent physical and dental examination.

A physical examination at Duke Hospital is required for final acceptance into the School of Nursing. This examination includes a chest x-ray and a tuberculin test.

ADMISSION TO ADVANCED STANDING IN THE SCHOOL OF NURSING: An applicant for advanced standing must have fulfilled the equivalent of the requirements for admission to the Freshman Class, must present official certificates of all work completed in other institutions, and must have an honorable dismissal from each institution previously attended. Credit for work completed will be determined in relation to the curriculum requirements of the School of Nursing. Applicants admitted to advanced standing may make up deficiencies for admission to the second year by attending the Summer Session.

Applicants for advanced standing in the School of Nursing should present, as far as possible, subjects corresponding to those required by the School. They may not, during their first semester, register for more than the minimum number of hours required of the class which they enter, except by permission of the Dean of the School of Nursing.

Transfer credits are tentatively evaluated pending the completion of two semesters of work in residence. To validate provisional credits the student must earn at least an average of C in a normal load of work. Transfer grades of C or above are rated at one quality point per credit hour when validated. Credits with grades of D are not acceptable.

The maximum amount of credit acceptable from a junior college

is 60 semester hours, exclusive of physical education. No credit is given for work completed by correspondence, and credit for no more than six semester hours is allowed for extension courses. Any extension work accepted must be specifically approved by the dean of the college to which the student seeks admission.

Residence

Students are housed in a fireproof residence located near the hospital. Rooms are adequately equipped with blankets and linen, making further provision by the student unnecessary. Life in the dormitory is under the regulations established by the Student Government Association with advice from the faculty. The dormitory, Hanes House, is new and planned for comfortable living. A Student Handbook including dormitory regulations is issued to each student.

Students in the degree program pay for rooms in Hanes House during the first year and Summer Session. During the academic year the rental charge for a single room is \$105.00 per semester. The rental charge for a double room is \$80.00 per semester. The charge for laundry for one semester is \$10.00. The rental charges for Summer Session are included under the description of that term on Page 17.

Board for these students may be secured at the hospital for \$200.00 for the semester. Students may prefer to eat at the University cafeterias with multiple choice menus. The cost for the academic year ranges from \$375.00 to \$500.00 depending on the taste of the individual. In the Men's Graduate Center near Hanes House is a cafeteria with multiple choice menus and a Coffee Lounge where sodas and sandwiches are served from 11:30 A.M. to 11:00 P.M. This is closed on Sunday.

Board, room and laundry is provided by Duke Hospital for students in the diploma program throughout the entire program and for students in the degree program after the first year and Summer Session

Financial Information and Living Accommodations



FEES paid by students and services of the students to the hospital cover only a part of the cost of their instruction and maintenance and the operation of the University. Income from endowment and contributions from alumni, alumnae, and other public-spirited men and women meet the balance, which constitutes more than half the total cost.

Fees and Estimated Expenses—Diploma Program

A registration fee of \$25.00 is required at the time of acceptance into the school. This advanced fee is applied toward the payment of tuition for the first year. One-half of the tuition fee of \$100.00 is payable at the beginning of each semester. An activities fee of \$15.00 is charged each year. Students pay for their uniforms and are responsible for payments for replacements.

	<i>First Year</i>	<i>Second Year</i>	<i>Third Year</i>
Tuition	\$100.00	\$100.00	\$100.00
Books	40.00	10.00	10.00
Activities	15.00	15.00	15.00
Room Key Deposit	1.00		
Uniforms	84.20		
Graduation Fees			9.25
	<u>\$240.20</u>	<u>\$125.00</u>	<u>\$134.25</u>

No student is permitted to attend classes until she has complied with all regulations concerning registration and payment of bills for the term.

Arrangements for purchase of uniforms are made with the uniform company in the first summer session. At that time, \$70.95 of the cost of the uniforms is paid.

Duke Hospital provides board, room and laundry for students in the School of Nursing in return for their services in the hospital. The rooms in the residence are fully equipped.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and after the fifteenth day all fees are considered as earned and no refunds are made.

Students are entitled to one transcript free of charge. Additional

copies are supplied at \$1.00 each. Records are not released when the Treasurer's office reports an unpaid account.

Fees and Estimated Expenses—Degree Program

A registration fee of \$25.00 is required of all new students. This fee is payable only once; it is not refundable. The general fee is in lieu of special fees usually charged for matriculation, use of laboratories, student health service, commencement, etc. One-half of the tuition and general fees are payable at the beginning of each semester.

	<i>First Year</i>	<i>S.S. 6 wks.</i>	<i>Second Year</i>	<i>Third Year</i>	<i>Fourth Year</i>
Tuition—University	\$ 350.00		\$350.00		
Tuition—School of Nursing ...			100.00	\$100.00	\$100.00
General Fee	150.00		150.00		
Room Rent	160.00	\$ 27.00			
Board	400.00	60.00			
Laundry	30.00	3.00			
Books	40.00	10.00	40.00	40.00	10.00
Activities	15.00		15.00	15.00	15.00
Uniforms		70.95			13.70
Graduation Fees					14.25
	<u>\$1,145.00</u>	<u>\$170.95</u>	<u>\$655.00</u>	<u>\$155.00</u>	<u>\$152.95</u>

No student is permitted to attend classes until she has complied with all regulations concerning registration and payment of bills for the term.

Arrangements for purchase of uniforms are made with the uniform company during the first summer term. At that time, \$70.95 of the cost of the uniforms is paid.

A fee for public health nursing will be added in the senior year when arrangements for the experience are completed.

After the first year and Summer Session the Duke Hospital provides board, room and laundry for students in the degree program of the School of Nursing in return for their services in the hospital. The rooms in the residence are fully equipped.

Students may have their bills sent to parents or guardians provided the Treasurer has been notified in writing with sufficient antecedence. Failure of a student or of a parent or guardian to pay bills on the dates scheduled will debar the student from class attendance until her account is settled in full; subsequent withdrawal does not entitle her to a refund. No student is considered by the Faculty as a candidate for graduation until she has settled with the Treasurer for all her indebtedness to the University. A student who has not settled all her bills with the Treasurer is not allowed to stand the final examinations of the academic year.

Refunds of tuition and other fees are made to students who withdraw within 14 days after the beginning of the semester. On and

after the fifteenth day all fees are considered as earned and no refunds are made.

Due to rising costs a readjustment in charges, including room-rents, is being considered. In the event of an adjustment applicants will be notified.

Students are entitled to one transcript free of charge. Additional copies are supplied at \$1.00 each. Records are not released when the Treasurer's Office reports an unpaid account.

Loan Fund

Through the generosity of the Kellogg Foundation, loan funds sufficient to cover tuition costs are available to students who demonstrate a real need and who are qualified. There are also a limited number of tuition scholarships for exceptionally qualified students.

The Summer Session



THE programs in the School of Nursing include courses in the Summer Session each year. Students in the School of Nursing have their courses approved in the School of Nursing and pre-register with the Summer Session office. Students from other colleges and universities who are admitted to the School of Nursing with advanced standing are expected to enroll in the Summer Session to make up deficiencies. Arrangements for registration are made through the office of the Dean of the School of Nursing.

The Summer Session of 1954, will include two six-week terms: Term I, June 9 to July 17; Term II, July 20 to August 27. By attending both terms it is possible for a student to earn as many as twelve semester hours of credit.

While the basic purpose of the Summer Session is to serve the academic and the professional requirements of those who are interested in their own educational advancement, the University recognizes the need of, and provides for, a varied recreation program both athletic and social.

University fees are charged at the rate of \$12 per semester hour for those admitted with advanced standing. Board at Duke Hospital is \$10.00 per week per person, room is \$4.50 per week for each occupant of a double room, and laundry is .50 a week. A bill will be sent to all pre-registered student to permit payment in advance.

General Regulations



ORIENTATION PROGRAM: All freshmen and transfer students are required to participate in the Activities of Orientation Week. The program includes general ability, achievement, and placement tests, orientation lectures, physical examinations, social events, special religious services, registration, and enrollment.

The University considers the planning of a course of study to be of primary importance. Perhaps the most significant moments of Orientation Week, therefore, are those which a new student spends with her faculty adviser. With the results of the several tests which all freshmen take available to them, the adviser and the student plan a course of study adapted to the ability, achievements, and goals of the individual student. New students who miss the whole or a part of the Orientation Program place themselves at a serious disadvantage at the very outset of their college career.

Health Regulations

The School has general supervision of the student's health. All physical defects, such as defective vision, dental needs, etc., must be corrected before admission to the School. The student must have been immunized against typhoid fever and vaccinated against smallpox during the current year. All students are required to pass a physical examination before admission to the School of Nursing and at intervals thereafter, a final examination being given at the end of the course. Students whose condition needs further observation may be admitted tentatively, but must cancel their application if later findings prove them physically unfit for nursing.

Students are allowed three weeks' sick leave during the three years of clinical practice.

Health Program

With the exceptions noted below, full medical and surgical care is furnished to all regularly matriculated student nurses. It includes hospitalization in the Student Nurses Infirmary or in a private nursing unit according to the preference of the student or the seriousness of the illness. Medical and Surgical care, drugs, dressings, x-ray, laboratory,

and staff but no private nursing is furnished without charge. Refraction of eyes, treatment of teeth and of all chronic and pre-existing conditions, such as diseased tonsils, hernias, pilonidal cysts and other elective surgery, chronic skin conditions, endocrine disturbances, etc., and accidents or illnesses occurring during vacations or while off the campus, are not included in this service. The cost of any necessary braces and orthopaedic appliances, as well as of special nursing, must be borne by the student and blood used for transfusions must be paid for or replaced. If the student has insurance providing hospital, medical or surgical benefits, the benefits shall be applied to the cost of her medical care.

Advisory consultation with a Psychiatrist is available through the Dean of Nursing at no expense to the student but office visits for psychotherapeutic interviews cannot be included in this service.

First year students in the four year degree program are not furnished maintenance by the hospital and will be asked to pay for board while hospitalized. Insurance benefits, if any, will be used to cover this.

A nurses health office is maintained in the student nurses' dormitory for the purpose of treating ambulatory cases. Admissions to the hospital are arranged through this office.

Grading

Grades are reported so as to indicate one of four things:

(1) *Passed.* A, B, C, and D are all passing grades. The letters are intended to indicate the following quality of work: A, exceptional; B, superior; C, medium; D, inferior.

(2) *Failed.* A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class.

(3) *Incomplete.* (a) A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. (b) Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

(4) *Absent from final examination.* (a) The grade X indicates that the student was absent from the regularly scheduled examination.

QUALITY CREDIT: The requirements for the degree are computed not only in semester hours but also in quality points. Quality points are earned by a student on the basis of her grades: for an A she receives three quality points for each semester hour; for a B, two quality points for each semester hour; for a C, one quality point for each semester hour; for a D, no quality points; for an F, a loss of one quality point for each semester hour. Credit for at least 125 quality

points, exclusive of physical education, is required for the degree of Bachelor of Science in Nursing.

Readmission

Students who are absent for more than one month on account of illness or have leave of absence may be readmitted to the same or a succeeding class at the discretion of the faculty.

Leave of Absence

Students are not expected to leave the School because of family or other personal reasons. Absence from the School is granted only in extreme cases. If a student is obliged to be away for a period exceeding four weeks, the Dean of the School of Nursing will determine the date of her return and the question of resuming her place in her original class.

Dismissal

The faculty of the School of Nursing may, at any time, place a student on probation or release her from the School if, in its opinion, she does not have the qualifications necessary for the profession. A student of the freshman class to remain in the degree program must pass at least six semester hours of work in her first semester and eighteen semester hours in her first academic year.

Requirements for Degrees in Nursing



Programs of the School of Nursing

THE School of Nursing offers two programs for students wishing to prepare for the profession of nursing. The diploma program covers a period of three calendar years with one month of vacation each year. At the completion of this program, the student receives the diploma in nursing and is then eligible for the examinations given by the North Carolina State Board of Nurse Examiners.

The program leading to the degree of B.S. in Nursing covers a period of four years; one academic year and one summer term and three calendar years. At the completion of this program, the student receives the degree of B.S. in Nursing and is then eligible for the examinations given by the North Carolina State Board of Nurse Examiners. The School is fully approved by the North Carolina Joint Committee on Standardization.

Program I Leading to a Diploma in Nursing

To fulfill the requirements for a diploma in Nursing a student must complete 67 semester hours as outlined below, and show proficiency in the practice of nursing.

SUMMER SESSION (12 WEEKS)

<i>First Term</i>	S.H.	<i>Second Term</i>	S.H.
Chemistry.....	3	Zoology.....	3
Orientation to the Health Field..	2	Introduction to Nursing.....	1
	<hr/> 5		<hr/> 4

FIRST YEAR

<i>First Semester</i>	S.H.	<i>Second Semester</i>	S.H.
Anatomy & Physiology.....	3	Anatomy & Physiology.....	3
Physiological Chemistry.....	3	Medical & Surgical Nursing....	6
Nutrition.....	3	Microbiology.....	3
Nursing Arts.....	4	Nursing Arts.....	2
Social Psychology.....	2	Social Psychology.....	2
	<hr/> 15		<hr/> 16

SUMMER SESSION (12 WEEKS)

		S.H.	
	Medical & Surgical Nursing	3	
	*SECOND YEAR		
<i>First Semester</i>	S.H.	<i>Second Semester</i>	S.H.
Medical & Surgical Nursing		Obstetric Nursing	4
including O. R. &			
Diet Therapy	4		4
Child Development	3		
	<hr/>		
	7		

* Class divided into four sections and rotated on these four services.

SUMMER SESSION (12 WEEKS)

N120 Pediatric & Communicable Disease Nursing.....			S.H.	4
*THIRD YEAR				
First Semester	S.H.		Second Semester	S.H.
Psychiatric Nursing.....	4		Advanced Medical & Surgical Nursing with Seminar on Nursing Problems.....	2
	<hr/> 4		Social Foundations of Nursing Education.....	3
				<hr/> 5

Description of Courses—Diploma Program

BIOLOGICAL AND PHYSICAL SCIENCE

ANATOMY AND PHYSIOLOGY.—The student gains an understanding and appreciation of the way body structure and body functions serve to maintain and promote health. These enable the student to practice and teach good hygiene and to comprehend anatomical and physiological pathology intelligently. Audio-visual aids are used extensively and in conjunction with laboratory work the anatomical structures are demonstrated on dissected human specimens and certain physiological principles are demonstrated. 6 s.h. DR. MARKEE AND STAFF

CHEMISTRY.—A course in the fundamentals of general inorganic chemistry with particular emphasis on the needs of the student nurse. A brief introduction to organic chemistry. 3 s.h. DR. TAYLOR

PHYSIOLOGICAL CHEMISTRY.—This course is designed to aid the student in understanding the chemical mechanisms of the human body both in health and in disease. The student also acquires knowledge concerning the chemical basis of diagnosis and therapy. 3 s.h. DR. TAYLOR

MICROBIOLOGY.—From the learning experiences included in this course the student is enabled to understand and appreciate the role in the prevention of microbial disease. 3 s.h. DR. POPE

PHYSICAL EDUCATION.—First year students are required to elect either swimming or basketball.

ZOOLOGY.—A course in general zoology especially adapted for those preparing to enter the profession of nursing. During the course emphasis will be placed on the principles of zoology as they apply to a vertebrate animal; the frog will be used as the type animal.

SOCIAL SCIENCE

N2. INTRODUCTION TO NURSING.—Designed to give the student an appreciation of the historical development of some of the present concepts in nursing. 1 s.h. ASSISTANT PROFESSOR INGLES

SOCIAL PSYCHOLOGY.—Through a study of the role of social and cultural patterns in their interaction with the individual personality and through an understanding of behavior development and personality adjustment, it is hoped that the student may advance toward maximum personal, social and professional maturity. By exploration of social patterns she learns something of the structure of contemporary society. Through a study of the techniques used in understanding and getting along with others, the student becomes better able to use these techniques in her own contacts with people. 4 s.h.

ASSISTANT PROFESSOR KOCH

CHILD DEVELOPMENT.—A study of principles of human growth and development with special emphasis on the understanding of children's needs, learning and behavior at various levels of development. Importance of infancy and pre-school years in the development of the individual. Planned especially for nurses. Two lectures and one laboratory period. 3 s.h.

DR. REICHENBERG-HACKETT

N160. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—This course is designed to help the student consider the opportunities open to her, her special aptitudes and abilities, her responsibilities, the fields of work for which she presents potentially the best qualifications and how to get started in a professional career. She is helped to see the place of nursing in the social and economic world of today. Emphasis is placed on the need for cooperation between all professions if satisfactory conditions for the maintenance of health and the prevention of disease are to be realized. 3 s.h.

PROFESSOR WILSON

NURSING AND ALLIED ARTS

Nursing 92 includes 20 hours a week of correlated clinical experience. Nursing 93, 120, 130, 140, 170 and 190, include 34 hours a week of correlated clinical experience.

N1. ORIENTATION TO THE HEALTH FIELD.—An introduction to basic health needs of the community and the agencies and programs designed to meet them. 2 s.h.

ASSISTANT PROFESSOR MASSEY

N61-62. NURSING ARTS.—A study of the fundamentals of healthful living and their application to basic nursing care in the home and in the hospital. Considers the nursing needs of individual patients and provides opportunity to plan and give patient care. 6 s.h.

ASSISTANT PROFESSOR RAPPAPORT, MISS KNOWLES, AND STAFF

Nutr. 53. NORMAL NUTRITION AND DIETETICS.—This course considers the nutritive requirements for individuals in different stages of development, and in different occupations. The methods of supplying foods conforming to the individual nutritional needs are given for varying income levels. Actual foods are compared according to their contribution of specific nutrients, and in relation to their place in the daily diet. 3 s.h.

MISS BARNARD

N92-93. MEDICAL AND SURGICAL NURSING.—A study of basic principles underlying nursing care of patients with common medical and surgical conditions. Pharmacology, nutrition in disease, and therapeutics are included. 9 s.h.

ASSISTANT PROFESSOR INGLES AND STAFF; PROFESSOR HART AND STAFF; PROFESSOR STEAD AND STAFF

120. PEDIATRICS AND COMMUNICABLE DISEASE.—This course is designed to help the student understand children, their response to illness, and the therapy involved in their care so that she can assume her role in child health promotion. A developmental approach is used throughout the course with emphasis on the child as a member of the family. The acute communicable diseases of childhood are included.

MISS AREY; PROFESSOR HARRIS AND STAFF

N130. OBSTETRIC NURSING.—Considers normal and abnormal phases of the reproductive cycle basic to nursing care of the mother and the newborn child including the premature infant; the effect of reproduction upon individual and family. 4 s.h.

MISS J. WILSON, MISS KIERNAN; PROFESSOR CARTER AND STAFF

N140. MEDICAL AND SURGICAL NURSING.—A continuation of Nursing 93. A discussion of principles of surgical aseptic technique basic to nursing practice in the operating room and practice in nutrition in disease is included in this course. 4 s.h. ASSISTANT PROFESSOR INGLES AND STAFF; MISS CAMPBELL, MISS KICKLIGHTER; PROFESSOR HART AND STAFF; PROFESSOR STEAD AND STAFF

N170. PSYCHIATRIC NURSING.—Discussion of the principles of psychiatric nursing and the functions and responsibilities of the nurse in the total care of the psychiatric patient with emphasis on mental hygiene and care and rehabilitation of the mentally ill. 4 s.h. PROFESSOR BUSSE, ASSISTANT PROFESSOR ZUKOWSKI AND STAFF

N190. ADVANCED MEDICAL AND SURGICAL NURSING.—Designed to clarify and broaden understanding of basic principles requisite for nursing care. Conference and seminars. 2 s.h. ASSISTANT PROFESSOR INGLES

Program II Leading to a B.S. in Nursing and a Diploma in Nursing

To fulfill the requirements for the degree of B.S. in Nursing, a student must complete 127 semester hours as outlined below, earn 127 quality points, and show proficiency in the practice of nursing.

The requirements for the degree of Bachelor of Science in Nursing are based on the principle that the student will derive the maximum benefit if the program includes a broad distribution of studies among representative fields.

For graduation with the degree of Bachelor of Science in Nursing, the following course work must be completed.

UNIFORM COURSE REQUIREMENTS	S.H.
English	6
Natural and Biological Science	23
Religion	6
Social Science and History	24
Literature, Music, Art Philosophy	6
Physical Education	2
Major (Nursing) and related work	60
Total	127

These requirements are described in detail below.

ENGLISH, 6 s.h.—This requirement is met by the completion of English 1-2. Students who demonstrate proficiency in English usage may be allowed to substitute 55 or 56 for English 1.

NATURAL AND BIOLOGICAL SCIENCE, 23 s.h.—To satisfy this requirement a student must complete laboratory courses in General Chemistry (3 s.h.), Physiological Chemistry (3 s.h.), Zoology (8 s.h.), Anatomy and Physiology (6 s.h.), and Microbiology (3 s.h.).

RELIGION, 6 s.h.—To meet this requirement 6 semester hours must be chosen from Religion 1, 2, 51, 52, 91, 93, 94, 101, 103, 104, 114, 130, 132, 181, 182.

SOCIAL SCIENCE AND HISTORY, 24 s.h.—To satisfy this requirement students must take Education 88 and 118, Psychology 116 and Sociology 91, 92 and N151. The remaining 6 s.h. may be selected from History 1-2 or 51-52 and Political Science 11-12 or 61-62 (Students who do not present for entrance 2 acceptable units of History must select History).

LITERATURE, MUSIC, ART, AND PHILOSOPHY, 6 s.h.—This requirement can be satisfied by a total of 6 semester hours in courses in English or American literature, foreign literature courses numbered above 100, literature courses in translation, courses in aesthetics, art, music, and courses in Philosophy (except 48, 103, 104, 109, 199).

PHYSICAL EDUCATION, 2 s.h.—In the School of Nursing, Physical Education is required during the first year and must be completed by the end of the first year.

MAJOR AND RELATED WORK, 60 s.h.—This requirement is met by completing courses in the School of Nursing in accordance with the regulations described.

The work is divided as follows:

FIRST YEAR					
<i>First Semester</i>			<i>Second Semester</i>		
		S.H.			S.H.
Eng	1 Freshman Composition....	3	Eng	2 Freshman Composition....	3
*Hist	1 Historical Background of the World Today.....	3	*Hist	2 Historical Background of the World Today.....	3
*Pol Sc	11 The American System of Government.....	3	*Pol Sc	12 The American System of Government.....	3
Relig	1 The English Bible.....	3	Relig	2 The English Bible.....	3
N	1 Orientation to the Health Field.....	2	Micro	4 Microbiology.....	3
Zool	1 General Zoology.....	4	N	2 Introduction to Nursing...	1
	Physical Education.....	1	Zool	2 General Zoology.....	4
		16		Physical Education.....	1
					18

SUMMER SESSION (6 WEEKS)

<i>First Term</i>		S.H.
Chem 50	Chemistry.....	3
Ed 88	Educational Psychology....	3
		6

SECOND YEAR					
<i>First Semester</i>			<i>Second Semester</i>		
		S.H.			S.H.
Anat 51	Anatomy & Physiology....	3	Anat 52	Anatomy & Physiology....	3
Chem 51	Physiological Chemistry....	3	N 92	Medical & Surgical Nursing.	6
Nutr 53	Nutrition.....	3	Ed 118	Educational Psychology— Developmental.....	3
N 61	Nursing Arts.....	4	N 62	Nursing Arts.....	2
Soc 91	General Sociology.....	3	Soc 92	General Sociology.....	3
		16			17

SUMMER SESSION (16 WEEKS)

<i>First Term (6 weeks)</i>		S.H.	<i>Second Term (10 weeks)</i>		S.H.
Elective	Literature, Music, Art or Philosophy.....	3	N 95	Introduction to the Field of Social Work.....	3
N 93	Medical & Surgical Nursing (cont. through summer).....	3			
		6			3

THIRD YEAR

<i>First Semester</i>		S.H.	<i>Second Semester</i>		S.H.
N 120	Pediatric & Communi- cable Disease Nursing..	6	N 130	Obstetric Nursing.....	6
†Soc N151	Family Relationships....	3	†Psych 116	Psychology of Adjustment.....	3
		9			9

* Choice.

† One-half of class each semester.

SUMMER SESSION (16 WEEKS)

		S.H.
N180	Public Health Nursing.....	3
N140	Medical & Surgical Nursing including O. R. & Diet Therapy.....	6
		<hr/> 9

FOURTH YEAR

	First Semester	S.H.		Second Semester	S.H.
	Elective above 100 level.....	3	N 181	Public Health Nursing cont. with Field Experience.	3
N 160	Social Foundations of Nursing Education.....	3			
N 170	Psychiatric Nursing.....	6			
		<hr/> 9			<hr/> 3

SUMMER SESSION (16 WEEKS)

		S.H.
N190	Advanced Medical & Surgical Nursing with Seminar on Nursing Problems.....	3

In the junior year the class is divided into three sections and rotated in the three major nursing courses.

In the senior year one half of the class are registered in Public Health Nursing each semester; the other half is divided between Psychiatry and Advanced Medical and Surgical Nursing. In the Summer Session the students are registered in Medical and Surgical Nursing (N 190) and Psychiatric Nursing (N 170).

Description of Courses—Degree Program

UNDERGRADUATE COLLEGES

EDUCATION

88. EDUCATIONAL PSYCHOLOGY: LEARNING AND MEASUREMENT.—This course and Education 118 constitute a general introduction to the field of Educational Psychology. This course deals with (1) the psychology of learning, including: the nature of the learning process; general principles or laws of learning; the course of learning and forgetting; factors influencing efficiency in learning and retention; and the transfer of training; and (2) measurement, including: the basic concepts in the measurement of intelligence; standardized achievement tests; the extent and significance of individual differences in ability and performance. Opportunity will be afforded for examination and study of a variety of tests of intelligence and achievement. *Either semester.* 3 s.h. (E)

ASSOCIATE PROFESSORS EASLEY AND RUDISILL;
AND ASSISTANT PROFESSOR PETTY

118. EDUCATIONAL PSYCHOLOGY: PSYCHOLOGICAL DEVELOPMENT.—This course traces the psychological development of the individual from infancy to maturity. The principal topics considered are: the interdependence of hereditary and environmental factors in development, the nature of the development process, the establishment of the early basic patterns of behavior, changes and conditions producing these changes throughout childhood and adolescence to maturity, and the origin and treatment of minor behavior disorders. To the degree practicable, students will observe children in typical and atypical situations as a means of securing concrete data on the problems treated in the course. Not open to students who have had Psychology 121 or 126. Prerequisite: three semester hours in psychology or educational psychology. *Either semester.* 3 s.h. (E)

ASSOCIATE PROFESSOR EASLEY

ENGLISH

L. ENGLISH FUNDAMENTALS.—All freshmen whose scores on the placement tests indicate that they are not ready for English 1 must take this course. Students who fail in English L must repeat the course. Students who have earned credit in English L must also take English 1 and 2. 3 s.h. (w)

ASSISTANT PROFESSOR JORDAN AND MR. NEWELL

1-2. ENGLISH COMPOSITION.—All freshmen are required to take course 1 and course 2.

Students who fail in English 1 or 2 must repeat the course in the following semester. Students in courses 1 and 2 who fail to make an average of "C" or better are strongly advised to earn credit for an additional course in English composition. 6 s.h. (E & W)

PROFESSOR WARD; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, BUDD, HARWELL, JORDAN, POTEAT, SUDGEN, WHITE, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MESSRS. BROOKS, HOLMES, KEIRCE, MULDER, NEWELL, AND, PADGETT

ENGLISH AND AMERICAN LITERATURE AND LANGUAGE

55, 56. REPRESENTATIVE WRITERS:—The following works are studied in the first semester: Chaucer's Prologue to *The Canterbury Tales* and at least two tales, Shakespeare's *1 Henry IV*, *King Lear*, and one other play, the English Bible (selections), Milton's *Paradise Lost* (selections) and some of the shorter poems; in the second semester: Pope's poems (selections), Fielding's *Joseph Andrews* or *Tom Jones*, selections from Keats's or Wordsworth's poems, selections from Browning's or Arnold's poems, Thackeray's *Vanity Fair* or Hardy's *The Mayor of Casterbridge*, selections from Yeats's poems, two plays by Shaw or a twentieth-century British or American novel. 6 s.h. (E & W)

PROFESSORS BLACKBURN, BOYCE, SANDERS, AND TURNER; ASSOCIATE PROFESSORS BEVINGTON, BOWMAN, MITCHELL, AND PATTON; ASSISTANT PROFESSORS BEVINGTON, POTEAT, SUDGEN, AND WILLIAMS; DRs. BOWERS, FRASER, KOTTLER, LANE, REICHARD, AND SMITH; MR. MULDER

HISTORY

1, 2. HISTORICAL BACKGROUND OF THE WORLD TODAY.—This course is an introduction to the study of modern history with special reference to the issues in the modern world. Topics selected for emphasis are: the contest between liberty and authority in the modern state; changing economic organization and theory—capitalism and the challenges to it; the problems of peace and war among the states; the changing faith men live and die by. Beginning about 1500 with the rise of the European dynastic states, the story is pursued in the first semester to approximately 1871, and in the second through the two great world wars. The central theme in both semesters is the expansion of the influence of Western Europe throughout the world, with some attention to the rise of the United States as a world power. 6 s.h. (W & E)

Sophomores and juniors are not admitted to this course. One semester of the course may be counted as a general elective but not as fulfilling the minimum uniform requirements or, except as provided above, as a basis of further work in history.

PROFESSOR HAMILTON; ASSOCIATE PROFESSORS FERGUSON, PARKER, AND ROPP; ASSISTANT PROFESSORS ACOMB, COLTON, AND DECOMBE; DR. DURDEN, MR. DOWNS, AND MR. OLIVER

51, 52. HISTORICAL BACKGROUND OF THE WORLD TODAY.—An introductory course for sophomores, juniors, and seniors dealing with the topics indicated in the description of course 1-2. 6 s.h. (W & E)

PROFESSOR CURTISS; ASSOCIATE PROFESSOR ROPP; ASSISTANT PROFESSORS ACOMB AND COLTON; DR. DURDEN; MR. DOWNS AND MR. OLIVER

PHILOSOPHY

49. ETHICS.—An introductory consideration of basic ethical concepts and principles as developed in European and American thought and culture. 3 s.h. (E & W)
 PROFESSORS BAYLIS AND NEGLEY; ASSISTANT PROFESSOR WELSH

POLITICAL SCIENCE

11-12. THE AMERICAN SYSTEM OF GOVERNMENT.—An introductory study of the principles and operation of the American government in the light of the present world position of the United States. (Only open to Freshmen.) 6 s.h.
 (E. & W) STAFF

[Students completing 11 in the spring semester should take course 62.]

61-62. AMERICAN GOVERNMENT AND POLITICS.—A study of the American constitutional and political system. Among other topics attention is given to the development of the constitution, federal-state relations, political parties and the organization and functions of the national, state and local governments. 6 s.h.
 (W & E) PROFESSOR CONNERY; ASSOCIATE PROFESSOR SIMPSON; ASSISTANT PROFESSORS CHEEK AND HANSON; DR. HALL

[Not open to freshmen or to students who have had courses 11-12 or 63-64.]

REQUIRED PHYSICAL EDUCATION

Two semester hours to be completed in two semesters are included in the 127 hours required for graduation.

At the beginning of the freshman year, after a series of tests have been given, individual conferences are held and each student is guided into the type of activity she most needs, as determined from the evaluation of the test scores and the results of the conference. This course continues for half the semester after which all freshmen take body mechanics and social recreation for the remainder of the semester.

Every student will take one semester of elected activity offered by the Department.

PSYCHOLOGY

116. PSYCHOLOGY OF ADJUSTMENT.—The course is planned to give an adequate understanding of problems of adjustment and of mental hygiene. Lectures and discussions cover an application of the principles and findings of normal and abnormal psychology as these relate to the adjustment of the average individual in our changing society; a survey of the principles of mental hygiene; discussions of current socio-cultural trends significant for individual adjustment. 3 s.h. (E)

ASSISTANT PROFESSOR REICHENBERG-HACKETT

RELIGION

1. THE ENGLISH BIBLE.—A survey of the contents of the Old Testament books in the light of their origin in the history and religion of the Hebrew people. 3 s.h.
 (E & W) PROFESSOR CRUM; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY, PRICE, SALES, AND WETHINGTON; MR. DANIELS

2. THE ENGLISH BIBLE.—A study of the personalities and literature of the New Testament against their Jewish, Hellenistic and Roman background. Although Religion I is not a prerequisite, it will be an aid to the student to complete 1 before taking 2. 3 s.h. (E. & W.)
 PROFESSORS CRUM AND MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PERRY, PRICE, SALES AND WETHINGTON; MR. DANIELS

51. THE ENGLISH BIBLE.—An introductory course in the Old Testament for sophomores and juniors. (See description of Religion I.) Students may not receive credit for both 51 and 1. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT PROFESSORS BRADLEY, PRICE, SALES AND WETHINGTON; MR. DANIELS

52. THE ENGLISH BIBLE.—A survey course in New Testament life and literature for sophomores and juniors. (See description of Religion 2.) It will be to the advantage of the students to take Religion 1 or 51 before taking 52. Students may not receive credit for both 52 and 2. 3 s.h. (E & W)

PROFESSOR MYERS; ASSOCIATE PROFESSOR PHILLIPS; ASSISTANT
PROFESSORS BRADLEY, PRICE, SALES, AND
WETHINGTON; MR. DANIELS

SOCIOLOGY

91-92. GENERAL SOCIOLOGY.—An introduction to the scientific study of social life; its origin, evolution and organization as illustrated in the study of a number of concrete social problems. 6 s.h. (E & W)

PROFESSOR JENSEN; ASSOCIATE PROFESSOR SCHETTLER; ASSISTANT
PROFESSORS ROY AND WHITRIDGE; MR. McNURLEN

Sociology N151. FAMILY RELATIONS.—This course has two objectives. First, it seeks to familiarize students with those basic facts and problems in family life of which an understanding is essential to successful professional work by nurses. Second, the course seeks to provide students with such information and insights as may aid them in making successful adjustments in their own courtship and marriage. Either semester. 3 s.h.

INSTRUCTOR TO BE ANNOUNCED.

ZOOLOGY

1. ANIMAL BIOLOGY.—The principles of biology as applied to animals. 4 s.h. (W & E)

ASSOCIATE PROFESSORS HUNTER AND ROBERTS AND STAFF

2. GENERAL ZOOLOGY.—A brief survey of the animal kingdom. Prerequisite: Zoology 1. 4 s.h. (W & E)

ASSOCIATE PROFESSORS BOOKHOUT AND
HUNTER AND STAFF

SCHOOL OF NURSING

BIOLOGICAL AND PHYSICAL SCIENCE

Anat. 51-52. ANATOMY AND PHYSIOLOGY.—The student gains an understanding and appreciation of the way body structure and body functions serve to maintain and promote health. These enable the student to practice and teach good hygiene and to comprehend anatomical and physiological pathology intelligently. Audio-visual aids are used extensively and in conjunction with laboratory work the anatomical structures are demonstrated on dissected human specimens and certain physiological principles are demonstrated. 6 s.h.

DR. MARKEE AND STAFF

CHEMISTRY

Chem. 50. CHEMISTRY.—A course in the fundamentals of general inorganic chemistry with particular emphasis on the needs of the student nurse. A brief introduction to organic chemistry. 3 s.h.

DR. TAYLOR

Chem. 51. PHYSIOLOGICAL CHEMISTRY.—This course is designed to aid the student in understanding the chemical mechanism of the human body both in health and in disease. The student also acquires knowledge concerning the chemical basis of diagnosis and therapy. 3 s.h.

DR. POPE

Micro. 4. MICROBIOLOGY.—From the learning experiences included in this course the student is enabled to understand and appreciate the role in the prevention of microbial disease. 3 s.h.

DR. POPE

SOCIAL SCIENCE

N2. INTRODUCTION TO NURSING.—Designed to give the student an appreciation of the historical development of some of the present concepts in nursing. 1 s.h.

ASSISTANT PROFESSOR INGLES

N160. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—This course is designed to help the student consider the opportunities open to her, her special aptitudes and abilities, her responsibilities, the fields of work for which she presents

potentially the best qualifications and how to get started in a professional career. She is helped to see the place of nursing in the social and economic world of today. Emphasis is placed on the need for cooperation between all professions if satisfactory conditions for the maintenance of health and the prevention of disease are to be realized. 3 s.h.

PROFESSOR WILSON

NURSING AND ALLIED ARTS

N92-93. Includes 12-24 hours per week of correlated clinical experience.

N120, 130, 140, 170, 190.—Includes 30 hours a week of correlated clinical experience.

N1. ORIENTATION TO THE HEALTH FIELD.—An introduction to basic health needs of the community and the agencies and programs designed to meet them. 2 s.h.

ASSISTANT PROFESSOR MASSEY

N61-62. NURSING ARTS.—A study of the fundamentals of healthful living and their adoption to basic nursing care in the home and in the hospital. Considers the nursing needs of individual patients and provides opportunity to plan and give the patient care. 6 s.h.

ASSISTANT PROFESSOR RAPPAPORT, MISS KNOWLES AND STAFF

Nutr. 53. NORMAL NUTRITION AND DIETETICS.—This course considers the nutritive requirements for individuals in different stages of development, and in different occupations. The methods of supplying foods conforming to the individual nutritional needs are given for varying income levels. Actual foods are compared according to their contribution of specific nutrients, and in relation to their place in the daily diet. 3 s.h.

MISS BARNARD

N92-93. MEDICAL AND SURGICAL NURSING.—A study of basic principles underlying nursing care of patients with common medical and surgical conditions. Pharmacology and therapeutics, nutrition in disease, and community aspects are included. 9 s.h.

ASSISTANT PROFESSOR INGLES AND STAFF; ASSISTANT PROFESSOR MASSEY; PROFESSOR HART AND STAFF; PROFESSOR STEAD AND STAFF

N95. INTRODUCTION TO THE FIELD OF SOCIAL WORK.—An orientation to social work services and how they may be used to meet patients' needs in illness and in rehabilitation. 3 s.h.

MISS WIEN

N120. PEDIATRIC AND COMMUNICABLE DISEASE NURSING.—This course is designed to help the student understand children, their response to illness, and the therapy involved in their care, so that she can assume her role in child health promotion in the hospital, the home, and the community. A developmental approach is used throughout the course with emphasis on the child as a member of the family. The acute communicable diseases of childhood are included.

ASSISTANT PROFESSOR MASSEY, MISS AREY, PROFESSOR HARRIS AND STAFF

N130. OBSTETRIC NURSING.—Considers normal and abnormal phases of the reproductive cycle basic to nursing care of the mother and newborn child including the premature infant. The effect of reproduction upon individual and family; community aspects and opportunities for teaching in maternal health promotion. 6 s.h.

ASSISTANT PROFESSOR MASSEY, MISS J. WILSON, MISS KIERNAN, DR. CARTER AND STAFF

N140. MEDICAL AND SURGICAL NURSING.—A continuation of Nursing 93. A discussion of principles of surgical aseptic technique basic to nursing practice in the operating room and practice in nutrition in disease are included in this course. 6 s.h.

ASSISTANT PROFESSOR INGLES AND STAFF; ASSISTANT PROFESSOR MASSEY, MISS CAMPBELL, PROFESSOR HART AND STAFF; PROFESSOR STEAD AND STAFF

N170. PSYCHIATRIC NURSING.—Discussion of the principles of psychiatric nursing and the functions and responsibilities of the nurse in the total care of the psychiatric patient with emphasis on mental hygiene and care and rehabilitation of the mentally ill. 6 s.h.

ASSISTANT PROFESSOR ZUKOWSKI.

PROFESSOR BUSSE AND STAFF

N180. PUBLIC HEALTH NURSING.—Principles, development, and trends of public health nursing with special consideration given to public health nursing in a health department serving a rural community. 3 s.h.

ASSISTANT PROFESSOR MASSEY

N181. PUBLIC HEALTH NURSING FIELD EXPERIENCE.—Planned, supervised practice in a public health agency in which the nursing service provides a program of family health guidance. 3 s.h.

ASSISTANT PROFESSOR MASSEY

N190. ADVANCED MEDICAL AND SURGICAL NURSING.—Designed to clarify and broaden understanding of basic principles requisite for nursing care. Emphasis is placed upon application of prior learning to health teaching and guidance of hospital patients. Conferences and seminars. 3 s.h.

ASSISTANT PROFESSOR INGLES,

ASSISTANT PROFESSOR MASSEY

Division of Nursing Education



Advanced Professional Programs

A DIVISION of Nursing Education was established in December, 1944, as an integral part of the Department of Education of Duke University. At the present time, qualified graduate nurses may work toward the degree of Bachelor of Science in Nursing Education.

The primary objective of the degree program for graduate nurses is to prepare qualified individuals for teaching and supervisory positions in schools of nursing and in nursing service agencies. Facilities for instruction include the undergraduate colleges of Duke University, the School of Nursing, the Medical School and Duke Hospital.

I. Degree of Bachelor of Science in Nursing Education

ADMISSION

Students who wish to work toward the degree of Bachelor of Science in Nursing Education must apply for admission to the Woman's College of Duke University. To be accepted they must satisfy the following requirements with respect to their high school education:

1. Graduation from an approved secondary school with at least fifteen acceptable units of credit.
2. Twelve units must be in English, foreign language, history and social studies, mathematics and natural science.
3. Three units may be in subjects listed above or in such subjects as art, commercial subjects, household economics, or music.

Students who have satisfactorily completed one or more years of college work in an approved college or university must also fulfill the requirements listed above with respect to high school credit, must present official transcripts of all work done in other institutions, and must have honorable dismissal from each institution previously attended.

Other basic minimum requirements include:

4. Graduation from an approved school of nursing.
5. Satisfactory ratings from individuals, with whom the applicant has had fairly recent contact.

OUTLINE OF PROGRAM

Credit for 120 semester hours (exclusive of physical education) on which an average grade of at least "C" is made is required for the degree of Bachelor of Science in Nursing Education. The work of the final year must be taken in residence at Duke University. One year of experience as a graduate nurse is required before the degree is awarded. The program of studies leading to this degree must include:

1. Minimum general education requirements (may be satisfied at Duke University or at any accredited college or university).

	S.H.
English 1-2.....	6
Natural Science.....	8
History, Economics or Political Science.....	6
Sociology.....	3-6
Psychology.....	3-6
Electives.....	12-15
(Literature, art, music, religion, ethics, language)	

44

2. Basic Nursing Program 40 (maximum)

In evaluating credit the standing of the School of Nursing, the record of the individual student, and scores on basic nursing achievement tests administered by the Department of Measurement and Guidance of the National League for Nursing to all candidates as soon as they enroll in their first course are taken into consideration.

3. Courses in Education and Nursing Education.

	S.H.
88. Educational Psychology: Learning and Measurement.....	3
118. Educational Psychology: Psychological Development.....	3
84N. Social Foundations of Nursing Education.....	3
101N. The Curriculum of the School of Nursing.....	3
115N. } Nursing Education—Principles and Practice.....	8
116N. }	
117. Community Nursing—Seminar and Field Trips to Community Agencies.....	3
	23

4. Minimum of fifteen semester hours in one field, such as zoology, chemistry, physics, sociology, or psychology, or in a clinical area.

The following courses in clinical areas are offered at present:

	S.H.
120N. Problems in Nursing Care.....	3
130N. Psychosomatic Nursing.....	4
131N. } Psychiatric Nursing.....	8
132N. }	
133N. Seminar in Psychiatric Nursing.....	3
134N. } Medical and Surgical Nursing.....	8
135N. }	
136N. Seminar in Medical and Surgical Nursing.....	3

Other courses which are offered to graduate nurses are as follows:

192N. Principles and Methods of Teaching in School of Nursing.....	3
193N. Ward Administration and Teaching.....	3
195N. Personnel Work in Schools of Nursing.....	3
124N. Nursing Education: Teaching of the Nursing Arts.....	3

DESCRIPTION OF COURSES

84N. SOCIAL FOUNDATION OF NURSING EDUCATION.—A special section of Education 84, applied to Nursing Education. A survey of major historical, philosophical, and sociological factors which have affected developments in nursing and Nursing Education. The purpose of the course is to give the student a better understanding of the place of nursing in present day society and the responsibilities of the individual nurse toward that society. 3 s.h. ASSISTANT PROFESSOR RAPPAPORT

101N. THE CURRICULUM IN THE SCHOOL OF NURSING.—The general principles of curriculum making and the factors which determine the content and organization of the nursing school curriculum are considered in this course. 3 s.h. ASSISTANT PROFESSOR INGLES

115N-116N. NURSING EDUCATION: PRINCIPLES AND PRACTICE.—A special section of Education 115-116. Principles of teaching applied to the nursing school situations and the planning and evaluation of instruction. Ninety hours of observation and of supervised teaching in the Duke University School of Nursing are required. Four hours of conference, observation, and practice teaching are required each week. Before beginning practice teaching, students must complete thirty hours of observation. (Not open to students who have had course 115-116.) 8 s.h. ASSISTANT PROFESSOR RAPPAPORT

117N. COMMUNITY NURSING.—Designed for administrators, teachers, and supervisors in schools of nursing. Emphasis is on the integration of out-patient departments and community social and health agencies into the nursing school curriculum and on the preparation of nurses for community service. 3 s.h. ASSISTANT PROFESSOR MASSEY

120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. 3 s.h. ASSISTANT PROFESSOR INGLES, ASSISTANT PROFESSOR ZUKOWSKI

124N. NURSING EDUCATION: TEACHING OF THE NURSING ARTS.—In this course an effort is made to help prospective teachers to integrate the facts and principles of the natural, social, and medical sciences into the teaching of nursing arts. Though major emphasis is placed upon problems which are involved in teaching the first course, the concept of the nursing arts as an integral part of each clinical area is stressed. 3 s.h. ASSISTANT PROFESSOR RAPPAPORT, MISS INGLES

130N. PSYCHOSOMATIC NURSING.—A study of the close relationship between mind and body in all illness and of the techniques of observation and interview both experimental and therapeutic. Lectures, clinics, conferences, discussions, and experience with patients. 4 s.h. ASSISTANT PROFESSOR ZUKOWSKI

131N-132N. PSYCHIATRY AND PSYCHIATRIC NURSING.—An advanced study with special emphasis on personality development and the preventive and therapeutic aspects of psychiatry and psychiatric nursing. In the second semester the management of practical situations of increasing complexity is stressed. Lectures, clinics, conferences, discussions, and experience with patients. 8 s.h. ASSISTANT PROFESSOR ZUKOWSKI, AND MEDICAL STAFF IN PSYCHIATRY

133N. SEMINAR IN PSYCHIATRIC NURSING.—Special study of areas such as behavior problems of children, projective tests, group therapy, mental hygiene clinics, etc. 3 s.h. ASSISTANT PROFESSOR ZUKOWSKI, AND MEDICAL STAFF IN PSYCHIATRY

134N-135N. ADVANCED MEDICAL AND SURGICAL NURSING.—A study of the medical and surgical aspects of selected diseases aimed at giving the student a better comprehension of the total care necessary to bring about the best possible results for patients. Lectures, discussions, case histories, and planned observation and experience with patients. 8 s.h. ASSISTANT PROFESSOR INGLES AND MEDICAL STAFF

136N. SEMINAR IN MEDICAL OR SURGICAL SPECIALTY.—Directed study in a selected medical or surgical specialty. Each student works on a problem of major interest to her. Individual research in the collection of original material. 3 s.h. ASSISTANT PROFESSOR INGLES

192N. PRINCIPLES AND METHODS OF TEACHING IN SCHOOLS OF NURSING.—The primary purpose of this course is to help teachers in schools of nursing to understand and to utilize generally accepted principles of learning and to carry out a more effective teaching program in a school of nursing. Instruction is given in the planning of courses, in methods of teaching in classrooms and in hospital divisions, in construction of examinations, and in the utilization of other methods of determining the effectiveness of a teaching program. 3 s.h.

ASSISTANT PROFESSOR RAPPAPORT

193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better to understand their functions in planning and managing a program on a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel, and a more adequate teaching program for students and others. 3 s.h.

ASSISTANT PROFESSOR INGLES

195N. PERSONNEL WORK IN SCHOOLS OF NURSING.—The primary purpose of this course is to help head nurses and supervisors to develop greater understanding of the principles of human behavior and greater ability to apply these principles in working with patients and others on hospital divisions, and in establishing cooperative relationships with other departments of the hospital. 3 s.h.

ASSISTANT PROFESSOR JACOBANSKY

II. Degree of Master of Education with a Major in Nursing Education

(Not offered in 1954-1955)

ADMISSION

A student who wishes to work toward the degree of Master of Education with a major in Nursing Education must apply for admission to the Graduate School of Duke University. To be eligible for admission as a candidate for this degree she must meet the following requirements:

- (1) Graduation from an approved college or university with an average grade of not less than "B."
- (2) Satisfactory standing on the Graduate Record Examination.
- (3) Satisfactory standing on a test of mental ability.
- (4) Ability to write acceptable English as demonstrated on a test.
- (5) Graduation from an approved school of nursing.
- (6) Satisfactory ratings from three individuals, preferably former teachers and supervisors with whom the individual has had fairly recent contact.

OUTLINE OF PROGRAM

Basic Required Courses in Education:

	S.H.
300. Methods of Educational Research.....	3
304. The School as an Institution.....	3
305. The Nature, Function, and Reorganization of the Curriculum.....	3
317. The Psychological Principles of Education.....	3
	<hr/> 12

Courses in Nursing Education:

310. Organization and Administration of Schools of Nursing.....	4
311. Problems in Personnel Administration in Nursing.....	4
312. Research Problem.....	4
	12
Minor, intra-departmental or extra-departmental.....	6
	<hr/> 30

Candidates for the Master of Education degree must have had two years of experience including administration, supervision, or teaching in a school of nursing or nursing service organization when the degree is granted.

Tuition, Fees, and Other Expenses

FEES PER SEMESTER

A matriculation fee of \$20.00 is paid at the time of acceptance to Woman's College.

Tuition	\$175.00
General Fee (Undergraduate) including health, library and incidental fees.....	75.00
General Fee (Graduate School).....	60.00
Laboratory Fee (amount depends upon course which is taken)	

LIVING ARRANGEMENTS

Students may make their own arrangements to live in private homes or Woman's College dormitories.

EMPLOYMENT

A limited number of nurses may be employed at Duke Hospital during the time they are taking courses at Duke University. Nurses who are working full-time (44 hours per week) may take one course each semester. Nurses who wish to reduce hours of work per week to 36, with a corresponding reduction in salary, may take two courses each semester.

For information about employment write to the Director of Nursing Service, Duke Hospital.

Program in Psychiatric Nursing



A TWELVE-MONTH program in psychiatric nursing is offered to qualified graduate nurses. The primary objective of this program is to prepare individuals for head nurse position in psychiatric units of hospitals, child guidance clinics, and related fields. Students who wish to qualify for supervisory or teaching positions in the psychiatric field are advised to complete the program which leads to the degree of Bachelor of Science in Nursing Education.

Facilities for clinical teaching and experience include the psychiatric in-patient unit, the out-patient department, the psychosomatic service of Duke Hospital, child guidance clinics, and the State Hospital in Raleigh, N. C.

Students have approximately 20 hours per week of carefully planned laboratory practice on clinical services, during which time they work closely with patients presenting a wide variety of emotional disturbances. They also have an opportunity to participate in staff conferences and clinics at Duke Hospital and at the State Hospital in Raleigh.

Approximately 30 semester hours of credit toward the Bachelor of Science in Nursing Education degree may be earned during the calendar year.

A limited number of training stipends are available through the U. S. Public Health Service for those nurses who have demonstrated particular interest and aptitude in this field.

Requirements for admission are the same as for all students admitted to the program which leads to the degree of Bachelor of Science in Nursing Education.

OUTLINE OF PROGRAM (ONE YEAR)

Fall Semester		<i>Credits</i>
Educ. 130N	Psychosomatic Nursing.....	4
Educ. 131N	Psychiatric Nursing.....	4
Soc. 101	General Sociology.....	5
Educ. 84N	Social Foundations of Nursing Education.....	3
		<hr/> 16
Winter Semester		
Educ. 132N	Psychiatric Nursing.....	4
Educ. 133N	Seminar in Psychiatric Nursing.....	3
Educ. 193N	Ward Administration and Teaching.....	3
Educ. 118	Educational Psychology-Developmental.....	3
		<hr/> 12
Summer		
Educ. 120N	Problem in Nursing Care.....	3

Program in Medical and Surgical Nursing



A TWELVE-MONTH program in medical and surgical nursing is offered to qualified graduate nurses. The primary objective of this program is to prepare individuals for head nurse positions in medical and surgical units of hospitals. Credit for the entire program applies toward the degree of Bachelor of Science in Nursing Education. Students who are interested in teaching and supervision in medical and surgical nursing are urged to complete all requirements for the degree.

OUTLINE OF THE PROGRAM

<i>Fall Semester</i>		<i>Credits</i>	<i>Spring Semester</i>		<i>Credits</i>
130N	Psychosomatic Nursing.	4	193N	Ward Administration and Teaching.	3
134N	Medical and Surgical Nursing.	4	135N	Medical and Surgical Nursing.	4
84N	Social Foundations of Nursing Education.	3	117N	Community Nursing.	3
	Elective.	3-6		Elective.	3-6
		<u>14-17</u>			<u>13-16</u>

SUMMER SESSION

S136N	Seminar in Medical and Surgical Nursing.	3
S120N	Problem in Nursing Care.	3

The courses in medical and surgical nursing and in psychosomatic nursing will include from four to 16 hours per week of field work in medical and surgical divisions and medical and surgical out-patient clinics of Duke Hospital, and with various community health and social agencies. Students who are interested in a particular medical or surgical specialty (orthopaedic nursing, neurosurgical nursing, etc.) may have added experience in that area during the summer months. For some students experiences in other hospitals may be arranged.

Requirements for admission are the same as for all students admitted to the program which leads to the degree of Bachelor of Science in Nursing Education.

Clinical Program in Operating Room Nursing

(Not offered in 1954-1955)



A PROGRAM in operating room nursing of nine months in length is offered to qualified graduate nurses who are interested in preparing for head nurse positions in an operating room.

ADMISSION

An individual who is interested in the program in operating room nursing must apply for admission to the Woman's College of Duke University as a *special* student. To be admitted as a special student the following records are required:

1. Transcript of high school or of college record.
2. Transcript of nursing school record.
3. Satisfactory rating from a nursing service administrator or supervisor with whom the applicant has had recent contact.

In addition to the above requirements an applicant must have had a minimum of six months' experience as an operating room nurse.

OUTLINE OF PROGRAM

*Courses in Nursing Education and Related Subjects

	<i>Credits</i>
84N. Social Foundations of Nursing Education.....	3
120. Problem in Nursing Care.....	3
193. Ward Administration and Teaching.....	3
195. Personnel Work in School of Nursing.....	3
Elective.....	3
	<hr/> 15

CLASSES AND RELATED EXPERIENCE IN OPERATING ROOM NURSING

The course in operating room nursing includes 60 hours of organized class work during the period of nine months and an average of 36 hours each week on duty, of which 18 hours is supervised experience. The class work includes a discussion of the facts and principles of chemistry, bacteriology, anatomy and physiology, underlying prepa-

* Credit toward the degree of B.S. in Nursing Education is given for these courses.

ration for and assistance with surgical operations, both general and special. The history of anesthesia is presented, as well as present day trends and developments in the field.

In the related field work the nurse becomes acquainted with the functions of various departments of the hospital and their relationship to the operating room. She has an opportunity to prepare for and assist with various surgical operations including general surgery, chest surgery, neuro-surgery, orthopaedic surgery, urological surgery, plastic surgery and eye, ear, nose and throat surgery. She is also given an opportunity to assist with administrative and supervisory functions in the operating room. and with planning and conducting a teaching program for students and others.

FEEES

Each student pays the regular University fees for courses in Nursing Education and related subjects. The fee per credit hour is \$12.00 (1949-50). In addition a matriculation fee of \$5.00 is paid each semester.

LIVING ARRANGEMENTS

Students who are taking the course in operating room nursing receive full maintenance in return for service to the hospital.

HEALTH CARE

Each student is required to carry hospitalization insurance to cover the cost of hospitalization during illness.

A sick leave of seven days is given during the nine months' period.

DATES OF ADMISSION

Students are admitted to the program in operating room nursing at the beginning of each semester.

CERTIFICATE

At the completion of the nine months' program in operating room nursing the student is granted a certificate.

INFORMATION

For further information about any program write to Director of the Division of Nursing Education, Duke Hospital, Durham, North Carolina. Application for admission to the Woman's College should be made to the Committee on Admissions, College Station, Durham, North Carolina.

THE SCHOOL OF FORESTRY

Fall Semester begins September 23, 1954

Spring Semester begins February 2, 1955

Forestry in Duke University



General Statement

FORESTRY in Duke University began early in 1931, when, through placing the Duke Forest under intensive management for forestry purposes, a substantial beginning was made in laying the foundation for educational work and research in forestry.

An academic-forestry curriculum, designed for students intent upon pursuing the study of forestry, particularly as a profession after graduation, was organized in Trinity College of Duke University in 1932. This course of study provides only for instruction in fundamental and auxiliary subjects basic to a proper understanding of the highly specialized work in technical forestry. Duke University offers no professional degree in technical forestry available to undergraduates.

Training in technical forestry leading to the professional degrees, Master of Forestry and Doctor of Forestry, is offered in the School of Forestry, and is open to graduates of recognized scientific schools or colleges, universities, and professional schools of forestry and to other men who meet the entrance requirements of the school.

Duke University is also prepared to offer, through the Graduate School of Arts and Sciences, graduate work in the more scientific aspects of forestry leading to the Master of Arts and Doctor of Philosophy degrees. This work is available to graduates of schools of forestry of recognized standing, and to college or university graduates holding the Bachelor's degree with their major work in appropriate scientific subjects.

Educational Facilities

A description of the facilities of the School of Forestry and of the Duke Forest is given in the *Bulletin of the School of Forestry*.

Fellowships, Scholarships, and Graduate Assistantships in Forestry



A NUMBER of fellowships, scholarships, and research assistantships are available to men who offer promise of becoming leaders in the forestry profession. These will be awarded for high character and marked scholastic ability as judged by education, experience, and personal references. For more detailed information see the *Bulletin of the School of Forestry*.

Tuition, Fees and Expenses



THE following table shows the general fees and charges collected from all students. All fees for each semester are due and payable, unless otherwise specified, at the time of registration at the beginning of that semester, and no student is admitted to classes until arrangements have been made with the Treasurer of the University for the settlement of fees.

General Fees

Tuition, per semester.....	\$175.00
General Fee, per semester.....	60.00

Forestry students may obtain admission to all regularly scheduled University athletic contests held on the University grounds during the entire academic year by payment of the athletic fee of \$10.00 per year plus any Federal taxes that may be imposed. This fee is payable in the fall semester.

Due to rising costs a readjustment in charges is being considered. In the event of an adjustment applicants will be notified.

TRANSCRIPTS: A student desiring to transfer from Duke University to another institution is entitled to one transcript of his record. A charge of one dollar is made for each additional copy.

PAYMENTS TO FELLOWS AND SCHOLARS: Payments by the University of stipends to fellows, research assistants, and scholars are made in four installments. on November 25, January 25, March 25, and May 25. Fellows and scholars are required to pay the regular tuition fee and such additional fees as are ordinarily required of graduate students.

Living Accommodations

Rooms for men are provided in the Men's Graduate Center. Food service is available. For more complete information see the *Bulletin of the School of Forestry*.

Requirements for Admission to the School of Forestry



THE admission requirements of the School of Forestry for work toward the Master of Forestry degree presuppose that an applicant is either:

1. A graduate of a scientific school, college, or university of high standing, but without professional training in forestry, or
2. A graduate of a professional school of forestry, or
3. A student who has successfully completed the pre-forestry curriculum of one of the institutions cooperating with the School of Forestry.

Each applicant must present a certified transcript of his academic record showing the courses he has taken, the number of credit hours he has earned and the grades received. The total number of quality points* must be at least one and one half times the total credit hours to meet the minimum scholastic standards required for admission to the School. An applicant also must have satisfactorily completed undergraduate work in minimum amount, as follows:

One year of biology, including at least one semester of botany, or one year of botany.

One year each of English composition and of chemistry.

One course each in physics and in the principles of economics.

Mathematics, through college algebra and trigonometry.

It is urged that an applicant without professional training in forestry present additional credits in the above subjects and in one or more of the following subjects: soils, geology, mineralogy, petrology, climatology, surveying, languages (particularly German and French), sociology, political science, philosophy, psychology, and zoology.

An applicant who is a graduate of a professional school of forestry will present a certified transcript of scholastic record showing the award of a degree. Before registering for the first semester of residence, such applicants will be required to select the branch or branches

* Grades for each hour of college credit and also for credit earned in the School of Forestry are valued in quality points as follows: "A," 3 points; "B," 2 points; "C," 1 point; "D," no points; and "F," no credit and —1 point, unless the failed courses have later been passed.

of forestry in which they wish to concentrate the major part of their work and to prepare their proposed programs in conference with the appropriate faculty adviser. Ordinarily graduates of a fully accredited school of forestry should be able to meet all requirements for the Master of Forestry degree in one full school year of resident study; others will require a longer period of residence.

Students must make application for admission in advance of the opening of the school year. Those students entering without acceptable courses in plane surveying, forest-tree identification, forest surveying, and forest mensuration must take the work in these subjects in the Summer Session, and are required to submit their applications prior to May 1. Students entering with advanced standing in all four courses should make application before September 1. Application blanks will be sent upon request made to the Dean of the School of Forestry.

Cooperative Plan of Study with Selected Colleges and Universities



AWARE of the far reaching values to be derived from training in the liberal arts and sciences, the Duke School of Forestry, since its inception, has had the cooperation of Trinity College, the men's undergraduate college of arts and sciences of Duke University, in preparing students for professional careers in forestry. Under the plan a student devotes his first three years to a coordinated and carefully integrated program of study in the basic arts and sciences in Trinity College. The summer between his junior and senior year and the two following school years are spent in the School of Forestry. Upon the successful completion of this five-year course of study, a student has earned the Bachelor of Science degree from Trinity College and the professional Master of Forestry degree from the Duke School of Forestry.

Based upon the experience and success of this cooperative program with Trinity College, the School of Forestry in 1952 initiated similar programs of collaboration with a selected group of colleges and universities located throughout the United States. These programs offer students the numerous advantages of a broad background in liberal arts and sciences as preparation for later professional training. A student intent upon following such a course of study should make application to one of the colleges listed below. Admission requirements and other information pertinent to matriculation may be obtained from

each of these institutions. Not later than the end of the first semester of the third year in the college or university of his choice, the student must make formal application for admission to the Duke School of Forestry. To qualify for admission under these programs, a student must have followed a planned course of study arranged in consultation with his advisor, must have the official recommendation of his college, and must meet the minimum requirements for admission to the Duke School of Forestry.

A list of cooperating schools is given in the *Bulletin of the School of Forestry*.

Requirements for the Degree of Master of Forestry



THE degree of Master of Forestry (M.F.) is conferred upon students who have satisfactorily completed at least two years of study in technical forestry and one term of thirteen weeks' work in plane surveying, forest-tree identification, forest surveying, and forest mensuration in the Summer Session. In addition to the Summer Session work a total of not less than sixty semester hours' credit is required for the M.F. degree, of which at least fifty shall have been obtained in the School of Forestry. Each student, to qualify for the M.F. degree, must have obtained at least one and one half quality points per semester hour of credit under the quality-point system.

Field studies of typical timber-harvesting, manufacturing, and other utilization operations in the South Atlantic Coastal Plain are conducted from the School's field headquarters during a two-week period in the spring semester as part of the work required of students registered in Harvesting and Processing Forest Products (Forestry 211-212). Other students may be permitted or advised to take the field trip for which one semester hour of credit may be earned by registering for Forestry 212. A similar period of field work in forest soils, silviculture, forest management, and other subjects in the coastal plain is available to students.

No student may take less than fourteen or more than eighteen hours in any one semester without special permission of the School of Forestry Faculty. The following work will be required of all candidates for the M.F. degree:

SUMMER SESSION

	S.H.
Plane Surveying (C.E. S110).....	4
Forest-Tree Identification (F. S149).....	1
Forest Surveying (F. S150).....	4
Forest Mensuration (F. S151).....	4

FIRST YEAR

First Semester

	S.H.
Harvesting and Processing Forest Products (F. 211).....	3
Properties of Wood (F. 259).....	3
Forest Soils (F. 261).....	3
Economics of Forestry (F. 277).....	3
Electives	3

Second Semester

	S.H.
Harvesting and Processing Forest Products Field Trip (F. 212).....	1
Forest Pathology (F. 224).....	3
Sampling Methods (F. 251).....	3
Dendrology (F. 254).....	3
Silvics (F. 264).....	3
Electives	2

SECOND YEAR

Two curricula in forestry are available after the common minimum requirements for both have been met. One is in general forestry; the other in forest products. The required work in each curriculum, in addition to that common to both, is:

GENERAL FORESTRY CURRICULUM

*First Semester**Second Semester*

	S.H.		S.H.
Forest Entomology (F. 231).....	3	Soils and Silviculture Spring	
Silviculture (F. 265).....	3	Trip (F. 266).....	1
Applied Silviculture (F. 267).....	1	Forest Protection (F. 274).....	2
Forest Valuation (F. 279).....	3	Advanced Forest Management (F. 342).....	2
Forest Management (F. 281).....	3	Thesis research or electives.....	10
Thesis research or electives.....	2		

FOREST PRODUCTS CURRICULUM

*First Semester**Second Semester*

	S.H.		S.H.
Seasoning and Preservation (F. 213).....	3	Forest Products Entomology (F. 232).....	3
Silviculture (F. 265).....	3	Wood Anatomy (F. 260).....	3
Forest Management (F. 281).....	3	Industrial Engineering (Eng. 158).....	3
Advanced Forest Utilization (F. 311).....	3	Thesis research or electives.....	6
Thesis research or electives.....	3		

The submission of a thesis for the M.F. degree is optional. In lieu of a thesis, and with the approval of a student's faculty adviser, an acceptable report on a special study will be required, credit for which will not exceed three semester hours.

Each candidate who writes a thesis will be required to file in the office of the Dean of the School of Forestry on or before May 15 three copies of the thesis, typewritten and bound in accordance with regulations set forth by the Faculty. The thesis shall be based upon an original study made in the field, laboratory, or library.

Work of equivalent grade done in residence at other institutions may, with the approval of the Faculty, be accepted as credit toward the M.F. degree. A minimum of one year's residence is required at Duke University. Students who have had satisfactory undergraduate training in forestry may, with the approval of the Faculty, elect to devote the major portion of their time to research under the supervision of one or more members of the Faculty and prepare a more comprehensive thesis than is required of students entering the School without previous work in forestry. Students in the School of Forestry may take in allied departments of the University as electives certain courses approved by the Faculty.

Requirements for the Degree of Doctor of Forestry



THE degree Doctor of Forestry (D.F.) is a professional and research degree conferred on those students who have satisfactorily completed specified requirements of advanced study and research. Although course work is a necessary part of a student's program, the mere accumulation of course credits will not be sufficient for the attainment of this degree. The granting of the D.F. degree is based primarily upon the student's thorough knowledge of a specialized field of study and upon the production of an acceptable dissertation embodying the results of original research. The general requirements, which are presented in the following paragraphs, ordinarily will be rigidly adhered to, although deviations in exceptional cases may be made with the approval of the Faculty of the School of Forestry.

The D.F. degree is offered with majors (also minors) in the following branches of forestry: forest economics, forest entomology, forest management, forest mensuration, forest pathology, forest soils, forest-tree physiology, forest utilization, silvics, silviculture, and wood and forest products technology.

Prospective students should correspond with the Dean of the School of Forestry on all matters pertaining to admission to the School.

ENTRANCE REQUIREMENTS: A prospective student must have received the degree of Master of Forestry, or its equivalent, from a school of forestry of recognized standing. His scholastic average for his undergraduate work must be at least $1\frac{1}{2}$ quality points, and that of his graduate studies two quality points per hour of credit.

An applicant must file a formal application for admission together with transcripts of his undergraduate and graduate academic records. In his application he should clearly state the branch of forestry in which he desires to concentrate, and if possible, the specific research.

The Committee on Admissions of the School of Forestry, together with the prospective student's major adviser, will determine if the qualifications of the applicant meet entrance requirements.

RESIDENCE REQUIREMENTS: The period of resident study beyond the M.F. degree or its equivalent is two years. Course work of equal grade taken at another college or university may, with Faculty approval, be accepted in partial fulfillment of the residence re-

quirement, but the last year of residence must be at Duke University. With the approval of the Faculty, one year of resident credit may be granted for work taken in the regular terms of the Summer Session of Duke University. Graduate work of a fragmentary nature taken over a period of several years will not meet the residence requirement.

PROGRAM OF STUDY: A committee consisting of five members of the Faculty will be appointed by the Dean to supervise the work of each student. This committee shall consist of a major adviser, a minor adviser and three other Faculty members. The major adviser will serve as Committee Chairman.

If the student's previous training is inadequate, he will be required to remedy such deficiencies as may be directed by his committee. The student, in consultation with his advisers, will prepare a program of study and research. The proposed program will be presented to the committee for consideration and acceptance, and then submitted to the Faculty of the School of Forestry for final approval. The minor requirement may be fulfilled by advanced course work or course work and research. Requirements for the minor will be established by the Faculty member in charge of the field. The minor may be taken in the School of Forestry, or in another department, school, or college in the University.

A grade point average of at least two quality points per credit hour is required of all work toward the doctorate.

FOREIGN LANGUAGES: A reading knowledge of two foreign languages is required. One of these shall be either French or German; the other will be selected by the committee with the view toward determining the student's needs. The foreign language examinations will be conducted by the appropriate language departments or, for certain languages, by a qualified member of the Faculty of Duke University.

PRELIMINARY EXAMINATION: At least six months before the student expects to receive the D.F. degree, and after he has completed the foreign language requirement and most of his formal course work, he will be required to take a comprehensive preliminary examination. The examination will be written in subjects specified, and may be followed by an oral examination given by the committee. The decision as to whether the examination has been passed or failed is the responsibility of the committee.

Should the student fail the preliminary examination he may apply for a second examination to be taken not earlier than six months after the first. Failure in the second examination renders the student ineligible to continue work for the D.F. degree at Duke University.

Upon satisfactory completion of the preliminary examination the student shall be considered a candidate for the D.F. degree.

DISSERTATION: In addition to obtaining adequate training in the field of his specialty, the student must demonstrate his ability to plan and conduct sound, original research. Evidence of this accomplishment must be presented in the form of an acceptable dissertation embodying the results of original work, which is a definite contribution to knowledge.

The subject of the dissertation must receive the approval of the Faculty, and the title filed with the Dean of the School of Forestry on or before October 15 of the academic year in which the candidate desires to take his final examination.

Four typewritten copies of the dissertation in approved form, must be deposited with the Dean of the School of Forestry on or before April 15 of the academic year in which the student expects to obtain the D.F. degree. The original and first carbon copy will be deposited in the University Library, the major adviser will receive one copy, and the fourth copy will be returned to the student.

The dissertation must be published either in its original form or in a modified form approved by the major adviser. In its published form the title page should include this statement: "A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Forestry in the School of Forestry of Duke University." In some instances an abstract, published in a recognized journal, will be considered as meeting the publication requirement.

The candidate must deposit a fee of \$50.00 with the Treasurer of the University on or before May 1 of the year the degree is to be conferred. If the dissertation is published in acceptable form within three years from the time the degree is granted, the deposit will be returned to the student upon receipt of 10 reprinted copies of the publication.

FINAL EXAMINATION: The final examination will be in defense of the candidate's dissertation and on related subject matter. It will be oral and will be conducted by the supervisory committee. At least six months must elapse between the dates of the preliminary and the final examinations.

Forestry in the Graduate School



MAJOR and minor work is offered in the scientific aspects of forestry leading the A.M. and Ph.D. degrees, which are administered by the Graduate School of Arts and Sciences. Work for these degrees may be pursued only in forest-tree physiology, wood anatomy and properties, forest pathology, silvics, forest soils, forest mensuration, forest entomology, and forest economics. Students who have had specialized training in botany or soil science and in allied basic subjects, such as physics, chemistry, geology, and zoology, may pursue graduate study and research only in the specialized fields for which their previous work has qualified them. Students who do not have previous training in forestry will be required to complete a minimum of thirty semester hours of approved work in forestry as a preliminary requirement to advanced study for the A.M. and Ph.D. degrees. Holders of these degrees will not be regarded as professionally trained foresters.

Applicants for admission to the Graduate School must ordinarily have made, in their undergraduate work, not less than a "B" average and must not have concentrated excessively in one field of study to the detriment of a rounded program. They should have met substantially the requirements for the A.B. or B.S. degree at Duke University.

In addition to fulfilling the usual requirements for admission, the applicant must satisfy the Director of Graduate Studies in Forestry as to his liberal arts training, as well as to his preliminary training in the field of forestry.

For detailed information concerning admission to the Graduate School, and for regulations governing candidacy for the A.M. and Ph.D. degrees, language requirements, residence requirements, and other regulations concerning these degrees, the student should consult the *Bulletin* of the Graduate School of Arts and Sciences.

Courses and Subjects of Instruction



With the exception of the Summer Session courses, odd-numbered courses are offered in the autumn semester, and even-numbered courses are offered in the spring semester.

IN THE SUMMER SESSION

C.E. S110. PLANE SURVEYING.—A special section of C.E. 61 intended for students in forestry and others of advanced standing. *Four weeks, eight hours a day, beginning June 10, 1954.* 4 s.h. MR. THARP

S149. FOREST-TREE IDENTIFICATION.—Field studies leading to the identification of trees and principal shrubs indigenous to the Piedmont and coastal plain forests of the Southeastern United States. *One, week, eight hours a day, beginning July 8, 1954.* 1 s.h. (w) PROFESSOR HARRAR

S150. FOREST SURVEYING.—Application of plane surveying to forest problems; practice in making boundary and topographic surveys of forested tracts, using both intensive and extensive methods. Work includes use of transit, level, traverse board, topographic abney and slope tape, and aneroid barometer. Prerequisites: Civil Engineering S110, plane surveying, Forestry S149, forest-tree identification or equivalents. *Four weeks, eight hours a day, beginning July 15, 1954.* 4 s.h. (w) ASSOCIATE PROFESSOR CHAIKEN

S151. FOREST MENSURATION.—Field studies in methods of measuring content and growth of trees and forest stands; practice in timber estimating, log scaling, use of mensurational instruments, and collection of basic data. *Four weeks, eight hours a day, beginning August 12, 1954.* 4 s.h. (w) PROFESSOR SCHUMACHER

FOR SENIORS AND GRADUATES

211-212. HARVESTING AND PROCESSING FOREST PRODUCTS AND FIELD TRIP.—Methods of harvesting and processing forest products with emphasis on methods and costs in managed North American forests. A two-week field trip (F. 212), during which typical forest harvesting operations and processing plants are studied, is required of students taking Forestry 211. The field trip (F. 212) may be taken by other students having had work equivalent to Forestry 211. F. 211—3 s.h.; F. 212—1 s.h. (w) PROFESSOR WACKERMAN

213. SEASONING AND PRESERVATION OF WOOD.—Principles of seasoning lumber and other forest products by air drying and kiln drying, types of kilns and their operation; principles, methods, and materials used in treating wood to increase its durability. 3 s.h. (w) PROFESSOR WACKERMAN

214. MARKETING FOREST PRODUCTS.—Methods of selling and distributing timber, lumber, and other forest products in domestic and foreign trade; transportation methods; promotional activities of trade associations; competition between producing regions for markets and problems arising from the development of wood substitutes. Prerequisites: Forestry 211-212 or equivalent. 3 s.h. (w) PROFESSOR WACKERMAN

216. LUMBER MANUFACTURING.—Methods of processing logs for sawn products with emphasis on the principles involved in obtaining maximum volume and quality yield for large and small mills and concentration yards; trends in production and consumption of lumber by regions and the development of new lumber products. 3 s.h. (w) PROFESSOR WACKERMAN

224. FOREST PATHOLOGY.—Special reference to diseases of forest trees. Prerequisites: Botany 1 and 2, or equivalents. 3 or 4 s.h. (w) PROFESSOR WOLF

231. **FOREST ENTOMOLOGY.**—Principles of protecting forests from insect attack; character of insect damage to forest trees and their products; identification and biology of important species; survey methods and control. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

232. **FOREST-PRODUCTS ENTOMOLOGY.**—Recognition of insect damage to wood products; etiology, biology and control of important species. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

236. **FOREST-GAME MANAGEMENT.**—Principles of management for the sustained production of desirable game and fur animals on forest lands; characteristics and biology of important species. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

237. **FOREST-RANGE MANAGEMENT.**—Principles of management of livestock grazing on forest ranges on the basis of sustained multiple use. 3 s.h. (w)

ASSOCIATE PROFESSOR ANDERSON

251. **SAMPLING METHODS IN FORESTRY.**—Statistical background for solution of sampling problems with special reference to sample inventory of a forest property. Offered both semesters. Prerequisite: Forestry S151. 3 s.h. (w)

PROFESSOR SCHUMACHER

252. **FOREST MENSURATION.**—Empirical equations and curve fitting appropriate for construction of timber yield tables, tree volume and taper tables; significance tests and graphical solution of equations. Assignments require operation of calculating machines. Prerequisite: Forestry 251. 3 s.h. (w)

PROFESSOR SCHUMACHER

254. **DENDROLOGY.**—Nomenclature, classification, and identification of woody plants with special reference to species indigenous to southeastern United States and other important forest regions of temperate North America. Laboratory and field work. Prerequisite: one year of biology. 3 s.h. (w)

PROFESSOR HARRAR

255. **BONDING OF WOOD.**—Preparation of veneers and lumber for bonding; types and characteristics of modern adhesives used in the manufacture of plywood and laminates; cold and hot pressing procedures; use of electronic heating; bag molding techniques; manufacture and properties of transmuted wood; inspection and testing procedures. Prerequisite: Forestry 260 or equivalent. 3 s.h. (w)

PROFESSOR HARRAR

257. **DESIGN OF FORESTRY EXPERIMENTS AND ANALYSIS OF DATA.**—Role of experimental design in field and laboratory, and statistical analysis of data as aspects of scientific methods in forest research. 5 s.h. (w)

PROFESSOR SCHUMACHER

259. **PROPERTIES OF WOOD.**—The chemical nature of wood substance and its industrial chemical derivatives. Wood-moisture relationships; pertinent non-mechanical physical properties; mechanical properties and factors affecting the strength of wood; standard timber testing procedures. Uses of woods as determined by their properties. Prerequisites: one year of college chemistry; one course in college physics. 3 s.h. (w)

PROFESSOR HARRAR

260. **WOOD ANATOMY.**—Study of the physical features and the gross and minute structural characteristics of wood leading to the identification of the commercial woods of the United States, and the important tropical woods used in American wood-working industries. Elementary microtechnique. Prerequisite: one year of biology. 3 s.h. (w)

PROFESSOR HARRAR

261. **FOREST SOILS.**—Origin, development, and classification of soils with special emphasis on those developed in humid climates; morphological, physical, and chemical properties of soils in relation to growth of trees; effect of forests on soils. Prerequisites: Chemistry 1 and 2, and Physics 1, or equivalent; physical geology, mineralogy, petrology, and analytical chemistry are also desirable. 3 s.h. (w)

ASSISTANT PROFESSOR RALSTON

264. **SILVICS.**—Ecological foundations of silviculture with special reference to forest site factors; influence of forests on their environment; growth and development of trees and stands; origin, development, and classification of forest communities; methods of studying forest environments. Desirable prerequisites: plant physiology, plant ecology, and Forestry 261, or equivalents. 3 s.h. (w)

PROFESSOR KORSTIAN

265. **THEORY AND PRACTICE OF SILVICULTURE.**—Principles governing natural regeneration and treatment of forest stands and their application; reproduction methods, intermediate cuttings, and cultural operations. Field practice includes marking for various kinds of cuttings, cultural treatments, and study of managed stands in the Duke Forest. Prerequisite: Forestry 264 or equivalent. 3 s.h. (w)

PROFESSOR KORSTIAN

266. **SOILS AND SILVICULTURE SPRING TRIP.**—Approximately one week at spring camp studying soils and silviculture in the coastal plain. Prerequisites: Forestry 261, 265 or equivalents. 1 s.h.

ASSISTANT PROFESSOR RALSTON

267. **APPLIED SILVICULTURE.**—Application and comparison of silvicultural practices to principal commercial forest species, types and regions of temperate North America, with particular emphasis on the South. Field work will include preparation of silvicultural plans. Prerequisite: Forestry 265 or equivalent. 1 s.h. (w)

PROFESSOR KORSTIAN

268. **FOREST SEEDING AND PLANTING.**—Place of artificial regeneration in practice of forestry; reforestation surveys and plans; collection, extraction, cleaning, testing and storage of forest tree seeds; direct seeding; nursery practice; forest planting. 2 s.h. (w)

PROFESSOR KORSTIAN

274. **FOREST PROTECTION.**—Principles of forest protection; causes, character and effects of forest fires; principles of forest fire prevention, presuppression and suppression; fire control costs and fire plans; protection against domestic animals, wildlife, and atmospheric agencies. 2 s.h. (w)

ASSOCIATE PROFESSOR CHAIKEN

276. **FORESTRY POLICY.**—Objective study and analysis of the development of public land and forestry policies in the United States, present policies of public and private forestry organizations, and current policy issues in the light of economic and other criteria. Prerequisites: Forestry 279, 281. 2 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

277. **ECONOMICS OF FORESTRY.**—Principles of economics used in the analysis of factors affecting the supply of forest products, pricing of stumpage and primary forest products, factors affecting the demand for forest products, economic characteristics and problems of the major forest products industries; analysis of such specific private forestry problems as marketing, forest ownership pattern, taxation, credit, risk, and economic fluctuations. Prerequisite: at least one course in the principles of economics. 3 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

279. **FOREST VALUATION.**—Principles of economics applied to the appraisal of land values and management alternatives; theory and application of interest and the discount process; marginal analysis applied to the specific problems of firms engaged in forestry. Prerequisite: Forestry 277 or consent of the instructor. 3 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

281. **FOREST MANAGEMENT.**—Principles of organizing forest properties for systematic management; use of data obtained in surveys and inventories; principles of forest regulation, including a study of normal and actual forests, rotations, cutting cycles, and methods of regulating the cut in even-aged and all-aged forests for sustained yield; introduction to the preparation of preliminary forest management plans. Prerequisites: Forestry S150, S151, or equivalents 3 s.h. (w)

ASSOCIATE PROFESSOR CHAIKEN

211A. TO 282A. **SPECIAL STUDIES IN FORESTRY.**—Work on the same level as the foregoing Senior-Graduate courses to meet the needs of individual students. Credits and hours to be arranged.

THE STAFF

FOR GRADUATES

301-302. ADVANCED STUDIES IN FORESTRY.—Credits to be arranged. To meet individual needs of graduate students in the following branches of forestry:

A. SILVICS.—Prerequisites: Forestry 254, 261, and 264 or equivalents.

PROFESSOR KORSTIAN

B. FOREST SOILS.—Prerequisite: Forestry 261 or equivalent.

ASSISTANT PROFESSOR RALSTON

C. SILVICULTURE.—Prerequisites: Forestry 265, 266 and 267 or equivalents.

PROFESSOR KORSTIAN

D. FOREST MANAGEMENT.—Prerequisite: Forestry 281 or equivalent.

ASSOCIATE PROFESSOR CHAIKEN

E. FOREST ECONOMICS.—Prerequisite: Forestry 277 or equivalent.

ASSISTANT PROFESSOR STOLTENBERG

F. PROPERTIES OF WOOD.—Prerequisites: Forestry 259 and 260, or equivalents.

PROFESSOR HARRAR

G. FOREST MENSURATION.—Prerequisite: Forestry 252, or equivalent.

PROFESSOR SCHUMACHER

H. FOREST ENTOMOLOGY.—Prerequisites: Forestry 231, 232 or equivalents.

ASSOCIATE PROFESSOR ANDERSON

I. FOREST UTILIZATION.—Prerequisite: Forestry 211-212 or equivalent.

PROFESSOR WACKERMAN

J. DENDROLOGY.—Prerequisite: Forestry 254 or equivalent. PROFESSOR HARRAR

311. ADVANCED FOREST UTILIZATION.—Analysis of the principles of determining the cost of and return from harvesting and manufacturing timber for various products and other uses of forests; study of factors governing the relation of tree size to net stumpage values; and the application of these principles and methods in the solution of actual case problems. Prerequisites: Forestry 211-212 or equivalent. 3 s.h. (w)

PROFESSOR WACKERMAN

320. SEMINAR IN SILVICULTURE.—Arranged primarily to give graduates of other schools of forestry special training in the silviculture of the forests of the South. All men taking this course should also register for Forestry 266. Prerequisite: At least one course in silviculture. 3 s.h. (w)

PROFESSOR KORSTIAN

322. SOIL CLASSIFICATION AND MAPPING.—Classification of soils as natural bodies. Mapping of soils, land use classes and forest site classes. Ordinarily one week of field study will be made of soils in either the coastal plain or mountains. Prerequisites: Forestry 261. 2 s.h. (w)

ASSISTANT PROFESSOR RALSTON

323-324. ADVANCED FOREST PATHOLOGY.—Advanced study and research on life histories and control of diseases of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and forest pathology. Credits to be arranged.

PROFESSOR WOLF

326. ADVANCED FOREST SOILS.—Interrelations of the physical, chemical, and biological characteristics of forest and range soils. Prerequisites: analytical chemistry and Forestry 261. 3 s.h. (w)

ASSISTANT PROFESSOR RALSTON

342. ADVANCED FOREST MANAGEMENT.—Examination and analysis of techniques employed in the management of industrial and public forests, particularly in the South; discussion of problems of large scale intensive forest management. One week is spent in field study in the South Atlantic Coastal Plain. Prerequisites: Forestry 267, 279, and 281 or equivalents. 2 s.h. (w)

ASSOCIATE PROFESSOR CHAIKEN

351-352. ADVANCED PHYSIOLOGY OF FOREST TREES.—Advanced study and research on problems in physiology of forest trees to meet individual needs of graduate students. Prerequisites: plant physiology and plant ecology and silvics. Credits to be arranged.

PROFESSOR KRAMER

356. SEMINAR IN FOREST ECONOMICS.—Examination and discussion of the application of economic concepts in forestry, the potential contribution of economic analysis to private and public forest management; current research in forest economics. Prerequisites: Forestry 277 and 279 or consent of the instructor; advanced courses in economics and economic theory are desirable. 2 s.h. (w)

ASSISTANT PROFESSOR STOLTENBERG

357-358. RESEARCH IN FORESTRY.—Credits to be arranged. Students who have had adequate training may do research under direction of members of the Faculty in the branches of forestry indicated under courses 301-302 with the same prerequisites as thereunder noted. Each branch to bear the same letter designation as under Courses 301-302.

THE SUMMER SESSION

First term begins June 9, 1954

Second term begins July 20, 1954

Admission



THE general requirement for admission to the Summer Session is graduation from an accredited secondary school or its equivalent. Rejection of a student's application for admission to one of the University's Colleges or Schools does not preclude admission of that student to the Summer Session as a special or unclassified student.

Admission to specific courses offered in the Summer Session is governed by the student's academic status (freshman, sophomore, junior, senior, graduate, special or unclassified) and by the pre-requisites of the course in question. Regulations governing admission and instruction as to procedure are given in the *Bulletin of the Summer Session*.

Registration



CLASSES BEGINNING JUNE 10. All Summer Session students whose classes begin on June 10, Term I, who *do not* complete registration in the Summer Session Office 119 New Administration Building, on or before June 5 *must* present themselves at general registration in the new gymnasium on June 9 to register.

CLASSES BEGINNING JULY 21. All Summer Session students who wish to register for courses offered during Term II or for research during Term II may register in the Summer Session Office on July 6 through July 15. All students who *do not* register for second term during this period *must* register in the Summer Session Office, 119 New Administration Building on July 20.

CLASSES BEGINNING ON OTHER DATES. All Summer Session students registering for courses beginning on dates other than those specified above must complete registration in the Summer Session Office *before* the date on which their classes begin. *Registration on the day on which classes are scheduled to begin will be considered late registration.*

For additional regulations relating to registration see the *Bulletin of the Summer Session*. This bulletin contains information also on University Services, Student Activities, Resources of the University, and Special Conferences and Courses.

Financial Information, Living Accommodations, and Medical Care



Fees

The University Fee:

Covering registration, tuition, and medical care.....	\$12.00 per semester hour
Teachers in full-time service in Elementary and Secondary Schools.....	6.00 per semester hour
Registered Nurses enrolled in Nursing Education courses	6.00 per semester hour

Laboratory Fees: (These where applicable are in addition to the University Fee.)

The School of Spanish Studies.....	\$15.00
Marine Laboratory.....	10.00

Fees Replacing University Fee:

Medical Mycology	\$50.00
Conference for Teachers of Science and Mathematics.....	8.00

Master's Degree Summer Session Fee:

Candidates for the Master's degree who do 15 hours or less of the program in Summer Sessions and who complete the thesis and/or take the final examination in the Summer Session pay a degree fee of.....	\$12.50
When more than 15 hours is taken in Summer Sessions and final examination is taken through the Office of the Summer Session, the degree fee is	\$25.00

Auditing Fees

1. Students registered for a full course program may audit non-laboratory courses (with the permission of the Director) at no extra charge.
2. Students carrying less than a full course program may be granted permission to audit a course or courses on payment of half the University fee per semester hour audited.....\$ 6.00 per s.h.

Late Registration Fee:

Students who fail to register prior to the first class day of a given course will pay an extra fee of.....	5.00
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Fee for Course Changes:

Course changes other than those required by the University will be made only on payment of an extra fee of.....	1.00
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Fee for Make-up Final Examination:.....

3.00

For information on Student Aid, Scholarships, Dormitory Accommodations, Room Rates, and Medical Care see the *Bulletin of the Summer Session*.

Academic Regulation



Kinds of Course Enrollment

SUMMER SESSION courses may be taken for "credit" or for "non-credit" or may be "audited." A student's program may be exclusively in one of these categories, or may combine any two of them or all three. Students taking a full or partial program for "credit" may enroll as auditors or as non-credit students in any number of additional courses.

CREDIT. The Summer Session term "credit" does not mean degree credit at Duke University unless the student has been admitted as a degree candidate by one of the colleges or schools of the University. A student taking a course for credit is expected to do all the work required and to take the final examination, and he will receive a grade. G.I. Bill benefits are available only to those veterans who enroll for credit.

NON-CREDIT. "Non-credit" enrollment is available to the student who wishes the privilege of participating in class discussions, exercises, and laboratory assignments but does not wish to take the examinations either mid-term or final. A "non-credit" student may do as much of the work of the course as he desires, but he may not take the final examination and he will not receive a grade. Full fees of \$12 per semester hour are required in "non-credit" enrollment.

AUDIT. An auditor is entitled to listen to lectures and class discussions, but he may not participate in discussions or take examinations. Students may not enroll as auditors in laboratory courses. A student carrying a full program for credit may be given permission to audit as many courses as he desires without additional fees. Students carrying less than a full program for credit may secure permission to audit but are required to pay the auditing fee of \$6 per semester hour.

Eligibility for Course Enrollment

Courses numbered 1-49 are primarily for freshmen, or freshmen and sophomores. Courses numbered 50-99 are ordinarily for sophomores, or sophomores and juniors. Courses numbered 100-199 are designed for juniors and seniors. Courses numbered 200-299 are planned for

seniors and graduates. Courses numbered from 300 up admit graduate students only. Courses numbered from 200 up are limited in enrollment to 25 students.

Length of Course and Credits Allowed

The Summer Session courses are of the same quality and credit value as courses in the regular semester. Credit earned in the Summer Session is in terms of semester hours. The majority of Summer Session courses carry 3 semester hours credit and require six weeks in residence. A limited number of basic courses in the sciences run for four weeks (Chemistry, Geology, Zoology) or five weeks (Physics). Introductory foreign language courses are given intensively on a three-week basis, as are a limited number of courses in Nursing Education.

The Normal Course Program

The normal and maximum program for a six-week term is 6 semester hours. The 4 and 5 semester hour courses in the sciences run for four and five weeks respectively and one such course constitutes a full course program.

Grading

Only a student taking a course for credit will receive a grade. The grade given represents the quality of the work done in the course.

PASSED.

Undergraduate Grades

A — excellent

B — good

C — average

D — poor but passing

Graduate Grades

E — exceptional

G — good

S — satisfactory

FAILED. A grade of F indicates that the student has failed the course, and in order to receive credit for the course he must repeat the work in class.

INCOMPLETE. A grade of I may be reported by the instructor if for any reason he is unable to report the final grade at the regular time. Incomplete courses must be completed before the close of the succeeding semester; otherwise the I is recorded as F, and the course must be repeated in class if the student is to receive credit for it.

ABSENT FROM FINAL EXAMINATION. The grade X indicates that the student was absent from the regularly scheduled examination.

Graduate Study in the Summer Session



A STUDENT who wishes to work toward the A.M., M.Ed., M.A.T., Ph.D., or Ed.D. degree must apply for admission to the Graduate School of Arts and Sciences. Only those students who have been officially admitted to the Graduate School will be required to register in the Graduate School. It is quite appropriate for a student who holds a bachelor's degree and who desires only professional credit to apply directly to the Director of the Summer Session for admission as a special or unclassified student. It should be understood, however, that the credit earned while the student is so listed is not credit toward an advanced degree in the Graduate School of Arts and Sciences. Students who look forward to taking an advanced degree by work in the Summer Sessions should make sure that all of their documents necessary for admission to the Graduate School (see below) have been forwarded to the Dean of that School.

To make formal application the student should address the Dean of the Graduate School, Duke University, requesting official application blanks. These should be filled out fully and returned at the earliest moment. The other documents needed to complete the application, namely, transcripts, letters of recommendation, and Graduate Record Examination scores for applicants in the departments of Economics, Psychology, and English, must be forwarded directly from the institutions or individuals to the Dean of the Graduate School. In no case will such documents be accepted directly from the student.

In order that application to the Graduate School for summer work be given due consideration, the student should submit all of his documents to the Dean of the Graduate School by June 1 before the first term, and by July 10 before the second term of the Summer Session. It would be difficult to give applications received after these dates the same attention given those received earlier. After the application is accepted and approved, the student will receive a letter of admission to the Graduate School.

The Ph.D. and Ed.D. Degrees

STUDY FOR THE PH.D. DEGREE: Students who are interested in working toward a Ph.D. degree should consult the detailed requirements as outlined in the *Bulletin* of the Duke University Graduate

School of Arts and Sciences. Of the three years required as minimum residence, not more than one year can be earned in Summer Sessions. Full-time enrollment for one six-week term is counted as one-fifth of an academic year.

STUDY FOR THE ED.D. DEGREE: Students who are interested in working toward an Ed.D. degree should consult the detailed statement in the *Bulletin* of the Graduate School of Arts and Sciences. For specific information regarding residence and programs for the Ed.D. degree, please write to the Director of Graduate Studies, Department of Education.

Requirements for the Master of Arts Degree

LANGUAGE REQUIREMENTS: The candidate for the A.M. degree must have a reading knowledge of at least one foreign language. (The several departments reserve the right to specify which foreign languages are acceptable.) Evidence of such knowledge may be furnished in either of two ways: (1) by successfully passing an examination, officially conducted by the appropriate foreign language department at Duke University, or (2) by a transcript showing the completion of the third college year of one language, or the second college year of each of two acceptable foreign languages.

If the student must take the examination to satisfy this requirement, he may request—should he feel well qualified—the language examination required of candidates for the Ph.D. degree. By passing this examination, he may satisfy the requirements for both degrees at one time.

MAJOR SUBJECT: As a prerequisite to graduate study in his major subject, the student must have completed a *minimum* of 12 semester hours of approved college courses in that subject, and 12 additional semester hours in that subject or in related work. Since some departments require more than 12 semester hours, the student should read carefully the special requirements listed by his major department, which are included as headnotes to the course offerings in the *Bulletin* of the Graduate School.

In his graduate work, the student, in order to complete the course requirements for the A.M. degree, must present acceptable marks for 24 semester hours of graduate courses, of which at least 12 semester hours must be in the major subject. In addition to these he must present a thesis, which carries a credit of 6 semester hours. Thus, his earned credit for the degree totals 30 semester hours.

MINOR SUBJECT: Beyond the work for his major, the student must take a minimum of 6 semester hours in a minor department, the department of the minor to be approved by his major department.

The remaining 6 semester hours of the necessary 24 may be taken in either of these departments, or in another approved by the major department and by the Dean of the Graduate School.

TRANSFER OF CREDITS: Under certain circumstances a maximum credit of 6 semester hours may be allowed for graduate courses completed elsewhere. The acceptance of credit up to this amount, however, will not reduce the minimum period of full-time registered residence at Duke University. In no case will credit be allowed for extension or correspondence courses.

With the approval both of the student's major department and the Dean of the Graduate School, a student who is granted such transfer credit may be permitted to register for as much as 12 semester hours of thesis research instead of the usual 6 semester hours. Or he may be permitted to fill out his schedule with as much as 6 semester hours of further undergraduate training or 6 semester hours of required language courses on the undergraduate level.

CANDIDACY FOR THE MASTER OF ARTS DEGREE: After a student who has been officially admitted to the Graduate School has successfully completed 12 semester hours of graduate course work, he may apply for candidacy for the A.M. degree. Two conditions must have been met: (1) he must have passed all of his course work with at least 3 semester hours of "G" (Good) grade or better; and (2) he must present to the Dean of the Graduate School an endorsement of his candidacy by the Director of Graduate Studies in his major department.

TIME LIMITS FOR COMPLETION OF THE MASTER OF ARTS DEGREE: The candidate for the A.M. degree must complete all of his course requirements and the thesis within a period of six calendar years from the date of his initial registration. Credits earned over a longer period of time cannot be credited toward a degree.

The student who expects to complete all requirements for the A.M. degree in the Summer Session must file with the Dean of the Graduate School, during the first week of the term when he expects to complete the work, a statement of his intention.

THE THESIS FOR THE MASTER OF ARTS DEGREE: The thesis for the A.M. degree should demonstrate the student's ability to collect, arrange, interpret, or report pertinent material on his special research problem. Although a publishable document is not required, the thesis must be written in a literate style, and should exhibit the student's competence in scholarly methods and procedures.

REGULATIONS AND PROCEDURES: On or before July 1 of the summer in which it is expected the degree will be conferred, the student must file with the Dean of the Graduate School, on the official blank provided for that purpose, the final title of the thesis.

Four bound, typewritten copies of the thesis must be submitted, in approved form, to the Dean of the Graduate School at least one week before the date of the thesis examination. The copies will then be distributed to the several members of the examining committee.

THE EXAMINING COMMITTEE AND THE EXAMINATION: After consultation with the professor who has directed the thesis, the Dean of the Graduate School appoints an examining committee composed of the director of the thesis and two other members of the Graduate Faculty. The candidate appears before this committee for examination, which usually is restricted to the thesis and to the major field, and lasts for about one and one-half hours.

If the candidate successfully stands his examination, the examining committee certifies to his passing by signing the title page of the thesis. The candidate then returns the original and one carbon copy of the thesis to the Dean of the Graduate School, who deposits them in the University Library.

Requirements for the Master of Education Degree

PREREQUISITES: The degree of Master of Education is granted ordinarily only to teachers or to others engaged in educational work.

Before a student is admitted to graduate study for this degree, he should have completed, on the undergraduate level, a minimum of 18 semester hours of approved work in Education, including courses in Educational Psychology, and courses in the History of Education, Educational Sociology, or School Administration.

Early in the program of his work, the student must pass successfully two examinations: (1) a test of general ability, and (2) a test designed to determine his ability to write acceptable English. The student, before the degree is conferred, must also present evidence testifying to at least two years of teaching experience, gained either before his admission to course work, or concurrently with it.

REQUIREMENTS FOR THE DEGREE: The M.Ed. degree may be earned either with or without the presentation of a thesis.

WITHOUT THESIS: Students who elect this plan must present a total of 30 semester hours. Twelve hours of this required work must include the *four* basic courses: Education 204, 210, 217, and 235. If a student, by examination, can demonstrate his competency in the subject matter of two of these courses, he may be granted exemption from the required work in these courses. In no case may he claim exemption for more than two.

Other requirements are: a departmental major (i.e., in Nursing Education, Elementary Education, Public School Administration, Public School Supervision, or Secondary Education) of at least 12 semester hours, and a minor of at least 6 semester hours in a department

other than Education. Toward the end of his residence the student must pass a comprehensive examination on his departmental major and on the content of the four basic courses. Permission to take such examinations must be obtained from the Director of Graduate Studies of the Department of Education, and a notice of intention must be filed with him at least three weeks before the announced dates of the examinations.

WITH THESIS: Students who elect this plan are permitted to substitute a thesis for 6 semester hours of the required course work. The student must present a thesis subject approved by the Professor of Education who intends to direct it, and by two other members of the staff in Education, including the Director of Graduate Studies. Two of the three members of the approving committee must be permanent members of the Duke University Graduate Faculty. The title of the thesis must be filed with the Dean of the Graduate School at the same time as the titles for the A.M. theses (see p. 36).

In addition to the thesis, the student must present 24 semester hours of course credit. Of these, 6 semester hours must be earned in *two* of the basic courses in the Department; Education 204, 210, 217, or 235. Of the remaining 18 semester hours, 6 semester hours must constitute a minor taken outside of the Department of Education; at least 12 semester hours must be taken in the student's departmental major.

The regulations regarding submission of typed copies of the thesis and the thesis examination are the same as those for the A.M. degree.

CANDIDACY FOR THE MASTER OF EDUCATION DEGREE: After a student who has been officially admitted to the Graduate School has completed the initial 12 semester hours of graduate course work, he may apply for candidacy for the M.Ed. degree. Two conditions must have been met: (1) he must have made passing marks on all of his course work and have made a grade of "G" or "E" on at least three semester hours of this work; and (2) he must present to the Dean of the Graduate School an endorsement of his candidacy by the Director of Graduate Studies in his major department.

TIME LIMITS FOR COMPLETION OF THE MASTER OF EDUCATION DEGREE: The candidate for the M.Ed. degree must complete all of his course requirements and the thesis within a period of six calendar years from the date of his initial registration. Credits earned over a longer period of time cannot be credited toward a degree.

The student who expects to complete all requirements for the M.Ed. degree in the Summer Session must file with the Dean of the Graduate School, during the first week of the term when he expects to complete the work, a statement of his intention.

Requirements for the Master of Arts in Teaching Degree

PREREQUISITES: The degree of Master of Arts in Teaching is designed for both recent graduates of Liberal Arts colleges who wish to enter public school teaching and teachers already in service.

A student should normally have completed a minimum of 12 semester hours in his proposed major subject and an additional 12 semester hours in that or related subjects. In the event that a student wishes to undertake a graduate major different from the undergraduate major, the prerequisites are possible of modification upon the recommendation of the student's committee and the approval of the Dean of the Graduate School.

PROGRAMS FOR THE DEGREE: One of two programs may be arranged, in consultation with the student's committee: (1) A major in Education of 18 to 24 semester hours and 6 to 12 semester hours in non-education courses. (2) A major in non-education courses of 18 to 24 semester hours and 6 to 12 semester hours in education. In both programs a minimum of 30 semester hours is required.

The non-education courses are to be taken in one or more subjects ordinarily taught in the secondary schools. The amount and distribution of this work will be determined by the needs of the individual student.

The Master of Arts in Teaching may be earned with or without the presentation of a thesis. If a student, in consultation with his committee, elects to present a thesis, 6 semester hours of the total of 30 semester hours required will be allotted to thesis research. He will then be required to complete 24 semester hours of course credits. The regulations concerning the writing and submission of the thesis, and the examination of it, are the same as those governing the thesis for other masters' degrees offered in the Graduate School.

THE COMMITTEE: Each candidate for the degree will be assigned a committee, appointed by the Dean of the Graduate School, to plan his program of study.

This committee will consist of three members, at least one of whom will be from the Department of Education, and at least one from another department. The chairman of the committee will normally be chosen from the department of the major.

Courses of Instruction



Minimum Enrollment Required for Courses

ALL courses are offered subject to minimum enrollments. The University reserves the right to withdraw undergraduate courses in which fewer than twelve students enroll, senior-graduate courses numbered 200-299 in which fewer than ten students enroll, and graduate courses and seminars numbered 300 or above in which fewer than six students enroll. In withdrawing a course, the University attempts to avoid undue hardships on students. Sometimes, therefore, courses are offered in spite of small enrollments. Courses not listed will be given when a demand develops and an instructor is available.

Department Officers and Regulations

Departments offering Summer Session programs are listed alphabetically. Under each department is given the name of the chairman and the name of the director of graduate studies. Where departments have set up special regulations for admission to candidacy for the Master's degree, these are included.*

Key to Room Assignments for Classes

The description of each course indicates the building and room in which the course is scheduled and the hour at which it will be given. For example: Economics S51 is scheduled as 10.208. This means Building 10, Room 208. The key to building numbers is given in the chart.

BOTANY

PROFESSOR HUGO L. BLONQUIST, CHAIRMAN—203 BIOLOGY BUILDING (WEST CAMPUS);

PROFESSOR PAUL J. KRAMER, DIRECTOR OF GRADUATE STUDIES—

04 BIOLOGY BUILDING (WEST CAMPUS)

For admission to candidacy for the Master's degree in Botany, students must have completed a minimum of eighteen semester hours of biological science, including six semester hours of botany in courses numbered above 100. Students who have not yet had the minimum eighteen hours, however, may enter higher courses by permission of the instructor, if he is convinced that they can carry the work for undergraduate credit, and may count such work toward the eighteen hours necessary for candidacy.

* For a complete list of the faculty see the *Bulletin of the Summer Session*.

FIRST TERM

S225. SPECIAL PROBLEMS.—Hours to be arranged. STAFF

S359. RESEARCH.—Hours to be arranged. STAFF

SECOND TERM

S225. SPECIAL PROBLEMS.—Hours to be arranged. STAFF

S359. RESEARCH.—Hours to be arranged. STAFF

SECOND TERM (Marine Laboratory at Beaufort, North Carolina)

S212. COASTAL AQUATIC VEGETATION.—A study of coastal vegetation with emphasis on aquatic vascular plants and algae inhabiting coastal areas as well as freshwater habitats in the outer Coastal Plain. Prerequisites, one year of botany or equivalent. 6 s.h. MR. BLOMQUIST

S359. RESEARCH.—Hours to be arranged. MR. BLOMQUIST

CHEMISTRY

PROFESSOR MARCUS E. HOBBS, CHAIRMAN—022 CHEMISTRY BUILDING (WEST CAMPUS);

PROFESSOR WARREN C. VOSBURGH, DIRECTOR OF GRADUATE STUDIES—

211 CHEMISTRY BUILDING (WEST CAMPUS)

All classes in Chemistry, Term I, will begin on June 22 and continue through July 17. All classes in Chemistry, Term II, will begin on July 21 and continue through August 14. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* on Page 19 of this *Bulletin*.

A course in chemistry constitutes a student's full program and occupies his entire time during each school day.

FIRST TERM

S1. GENERAL INORGANIC CHEMISTRY.—Lectures, recitations, and laboratory work on the elementary principles of chemistry and on the occurrence, preparation, properties, and uses of the elements and their compounds. Recitation daily, 8:00-9:00, 6.112; laboratory daily, 9:00-12:00, 6.108; lecture daily, 12:00-1:00, 6.116. 4 s.h. MR. WILDER

S61. FUNDAMENTALS OF ANALYTICAL CHEMISTRY.—A study of the relations of electrolytes in solution and of chemical equilibrium illustrated by laboratory experiments involving the techniques of gravimetric, volumetric, and colorimetric analysis. Prerequisites: Chemistry 1-2 and Mathematics 6 or equivalent. Lecture or recitation daily, 8:30-10:00, 6.122; laboratory daily, 11:00-12:30 and 2:00-5:00, 6.208. 4 s.h. MR. SAYLOR

S151. ORGANIC CHEMISTRY.—An introduction to the study of carbon compounds. Compounds of the aliphatic series form the basis of lectures, discussions and laboratory experiments. Prerequisite: Chemistry S61. Recitation daily, 8:00-9:00, 6.01; laboratory daily, 9:00-12:00, 6.301; lecture daily, 12:00-1:00, 6.01. 4 s.h. MISS BROWN

S275. THESIS RESEARCH.—Research in the fields of physical, analytical, inorganic, or organic chemistry. Open to those students whose research programs for the A.M. and Ph.D. degrees have been approved by the department and by one of the instructors in charge of the course. Schedule to be arranged. (Not more than one semester hour of credit per week for full-time schedule or one semester hour each two weeks for half-time schedule.) 2 to 8 s.h. STAFF

SECOND TERM

S2. GENERAL INORGANIC CHEMISTRY.—A continuation of S1. Prerequisite: Chemistry S1. Recitation daily, 8:00-9:00, 6.112; laboratory daily, 9:00-12:00, 6.108; lecture daily, 12:00-1:00, 6.116. 4 s.h. MR. STROBEL

S152. ORGANIC CHEMISTRY.—A study of compounds of the aromatic series and of carbohydrates and proteins. Prerequisite: Chemistry S151. Recitation daily, 8:00-9:00, 6.01; laboratory daily, 9:00-12:00, 6.301; lecture daily, 12:00-1:00, 6.01. 4 s.h. Mr. BRADSHIER

ECONOMICS

PROFESSOR CALVIN B. HOOVER, CHAIRMAN; PROFESSOR FRANK T. DEVYVER, EXECUTIVE OFFICER OF THE DEPARTMENT—203H SOCIAL SCIENCE BUILDING (WEST CAMPUS); PROFESSOR JOSEPH J. SPENGLER, DIRECTOR OF GRADUATE STUDIES—322 LIBRARY BUILDING (WEST CAMPUS)

FIRST TERM

S51. PRINCIPLES OF ECONOMICS.—A short course in the essential principles of economic science. (This course will not count as a part of the minimum economics requirements for graduation until the equivalent of S52 has been completed. Credit for Ec. S51 will not be given until Ec. 52 has been completed.) 10.208. 7:40-9:00. 3 s.h. Mr. MCKENZIE

S52. PRINCIPLES OF ECONOMICS.—A continuation of Economics S51, emphasis on economic problems. 10.209. 11:00-12:20. 3 s.h. Mr. MCKENZIE

S105. INDUSTRIAL MANAGEMENT.—A study of the organization and management of industrial production, with emphasis upon the principles governing location and plant design, the planning and control of materials and methods, and general price policies. 10.208. 11:00-12:20. 3 s.h. Mr. JOERG

S115. ECONOMIC GEOGRAPHY: TEACHERS' COURSE.—A study of the interrelation of human activities and environmental elements. The discussion embraces location, maps and their interpretation, the major climatic regions, seasonal influences, weather, lands and their uses, soils and minerals, bodies of water, plants, animals, and the works of man, as environmental factors. B113. 9:20-10:40. 3 s.h. Mr. LEMERT

S118. ECONOMIC GEOGRAPHY OF THE SOUTH.—A study of the agricultural, commercial, and industrial development, with special emphasis upon the expansion of Piedmont industries. B113. 11:00-12:20. 3 s.h. Mr. LEMERT

S143. CORPORATION FINANCE.—Principles and problems in the financial organization of corporations; the study of corporate securities, the management of capital, the distribution of earnings; industrial combinations; insolvency and reorganization. (Though not a prerequisite, Economics 57-58, Principles of Accounting, or Economics 60, General Accounting, are recommended to students electing this course). 10.210. 9:20-10:40. 3 s.h. Mr. JOERG

S171. ADVANCED ACCOUNTING.—Advanced accounting theory and practice applied to the managerial problems of valuation and operation in corporations, consolidations, mergers, and liquidations. Open to students who have completed Accounting 57-58. June 9-June 28. 10.212. 7:40-12:20. 3 s.h. Mr. MANN

S172. ADVANCED ACCOUNTING.—A continuation of Economics S171. June 29-July 17. 10.212. 7:40-12:20. 3 s.h. Mr. MANN

S231. THE ECONOMIC HISTORY OF EUROPE.—The economic development of Europe from medieval times to the present, treating such topics as the guilds, mercantilism, money, banking, crises, the Industrial Revolution, and interrelations of government and business, and the economic consequences of war. 10.209. 9:20-10:40. 3 s.h. Mr. SMITH

S286. LATIN-AMERICAN ECONOMICS.—Facts and factors in the economic structure and growth of the Latin-American nations; population, labor productivity, and standards of living; problems of industry, agriculture, and mining; transportation and public utilities; monetary and fiscal policies; the migration of capital; economic thought and institutions. 10.209. 7:40-9:00. 3 s.h. Mr. SMITH

S318X. THESIS SEMINAR.—Hours to be arranged.

MR. SMITH

SECOND TERM

S51. PRINCIPLES OF ECONOMICS.—A short course in the essential principles of economic science. (This course will not count as a part of the minimum economics requirements for graduation until the equivalent of S52 has been completed. Credit for Ec. S51 will not be given until Ec. 52 has been completed.) 10.209. 11:00-12:20. 3 s.h.

MR. DEWEY

S52. PRINCIPLES OF ECONOMICS.—A continuation of Economics S51, emphasis on economic problems. 10.209. 7:40-9:00. 3 s.h.

MR. DEWEY

S155. LABOR PROBLEMS.—An examination of present-day labor problems followed by an intensive study of methods used by employers and workers in meeting those problems. 10.204. 7:40-9:00. 3 s.h.

MR. CARTTER

S181. BUSINESS LAW.—The fundamental principles of law as applied to routine business transactions. The topics presented are: contracts, negotiable instruments, forms of business organizations. *For seniors.* July 20-August 6. 10.212. 7:40-10:40. 3 s.h.

MR. DICKENS

S182. BUSINESS LAW.—A continuation of S181. The topics presented are: agency, bailments, sales and related principles. *For seniors.* Prerequisites: Economics S181. August 9-August 27. 10.212. 7:40-10:40. 3 s.h.

MR. DICKENS

S257. DYNAMICS OF THE LABOR MOVEMENT.—A study of the forces which have shaped the growth of the labor movement. Special emphasis on the origin of modern trade unionism, relating its growth with Western philosophic developments, and with the changing economic and social structure of society in Europe and America. 4.324H. 11:00-12:20. 3 s.h.

MR. CARTTER

S318X. THESIS SEMINAR.—Hours to be arranged.

MR. CARTTER

EDUCATION

PROFESSOR WILLIAM H. CARTWRIGHT, CHAIRMAN—1C WEST DUKE BUILDING (EAST CAMPUS);
PROFESSOR EDWARD C. BOLMEIER, DIRECTOR OF GRADUATE STUDIES—
1C WEST DUKE (EAST CAMPUS)

For admission to candidacy for the Master of Arts (A.M.) degree with major in Education, or for the Master of Education (M.Ed.) degree, students must, in addition to meeting the general requirements for admission to the Graduate School, meet the following specific requirements: Credit for (1) eighteen semester hours of acceptable prior work in Education and (2) twelve semester hours of acceptable prior work in a minor field. If Psychology, Sociology, Economics, or Political Science is chosen for the minor, six semester hours of work completed after entering the Junior year in college will be accepted.

The degree of Master of Arts is available in the divisions of Public School Administration, Public School Supervision, Secondary Education, Elementary Education and Educational Psychology. Every candidate for the Master of Arts degree in the Department should elect at least twelve semester hours in one of these divisions in which he plans to write his thesis and the remainder of his work, including the six semester hours in his minor, with the approval of the proper division adviser. The degree of Master of Education is available in the divisions of Public School Administration, Public School Supervision, Secondary Education, and Elementary Education. Dr. Bolmeier and Dr. Stumpf are advisers to students in School Administration and in Supervision; Dr. Carr, Dr. Petty, and Dr. Rudisill are advisers in Elementary Education; Dr. Bolmeier, Dr. Cartwright and Professor Childs are advisers in Secondary Education; and Dr. Weitz is adviser in Educational Psychology. Candidates for the Master of Arts, Master of Education, or Master of Arts in Teaching degree should read with special care the regulations of the Graduate School as set forth on pages 34-38.

Note on the four courses required for the Master of Education Degree: In the summer of 1955 Education S210 and S217 will not be offered.

FIRST TERM

584. SOCIAL FOUNDATIONS OF EDUCATION.—Survey of the place and function of education and an understanding of the school as a social institution. 2.101. 9:20-10:40. 3 s.h. MR. STUMPF

588. EDUCATIONAL PSYCHOLOGY: LEARNING AND MEASUREMENT.—This course and Education 118 constitute a general introduction to the field of Educational Psychology. This course deals with (1) the psychology of learning, including: the nature of the learning process, general principles or laws of learning, the course of learning and forgetting, factors influencing efficiency in learning and retention and the transfer of training; and (2) measurement, including: the basic concepts in the measurement of intelligence, standardized achievement tests, the extent and significance of individual differences in ability and performance. Opportunity will be afforded for examination and study of a variety of tests of intelligence and achievement. MESSRS. EASLEY AND COLVER

S88.1. 10.110. 7:40-9:00. 3 s.h.

S88.2. 10.210. 7:40-9:00. 3 s.h.

5201. TEACHING AND SUPERVISION OF ARITHMETIC.—This course gives special attention to the number system, the fundamental operations (with whole numbers, fractions, and decimals), percentage and measurements. The course will consider the meaning theory, methods of teaching, problem solving, evaluation, practice and drill, and selection and gradation of arithmetical contents. The course is designed for teachers and supervisors in the elementary school. 10.204. 7:40-9:00. 3 s.h. MR. PETTY

5204. THE SCHOOL AS AN INSTITUTION.—The place of the school in society, its history and philosophy. Selected problems guiding the reading of students will be discussed in class. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 10.205. 7:40-9:00. 3 s.h. MR. BOLMEIER

5205. CURRICULUM PROBLEMS IN SECONDARY EDUCATION.—A consideration of the aims and objectives of secondary school subjects, emphasizing practical problems of curriculum-making in the high school. 2.201G. 9:20-10:40. 3 s.h. MR. CHILDS

5210. INTRODUCTION TO EDUCATIONAL RESEARCH.—The general purpose of this course is to give the student an overview of research, acquaint him with the nature of research processes, and develop within him an appreciation of the essential characteristics of good research. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 2.301. 11:00-12:20. 3 s.h. MR. STUMPF

5211. THE PROBLEM CHILD (also Psychology 5211).—Study of problem behavior and adjustment in children with emphasis on the causes and treatment of conduct and neurotic disorders of the maladjusted child. Particular attention will be paid to mental hygiene principles in the handling of problem children in school and home. 2.105. 9:20-10:40. 3 s.h. MR. BORSTELMANN
(See also Psychology 5232, **PSYCHOLOGY OF THE PHYSICALLY HANDICAPPED**, p. 56.)

5226. TEACHING READING IN THE ELEMENTARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. The course provides practice with elementary-school children suffering reading retardation, including testing, diagnosis, and daily remedial teaching during the six-week period. A.2F. 9:20-10:40. 3 s.h. MISS RUDISILL

5236. TEACHING READING IN THE SECONDARY SCHOOL.—A study of the nature of the reading process and of principles, methods, and materials for the development of effective reading attitudes and skills as applied both to developmental and remedial programs. The course provides practice with secondary-school

children suffering reading retardation, including testing, diagnosis, and daily remedial teaching during the six-week period. For secondary-school teachers of all subjects who wish to improve the reading and study habits of their students. A2F. 11:00-12:20. 3 s.h. Miss RUDISILL

S246. THE TEACHING OF MATHEMATICS.—This course deals with such topics as aims, curriculum, course and lesson planning, and classroom procedure for teaching secondary-school mathematics. 6.112. 11:00-12:20. 3 s.h. Mr. REYNOLDS

S253. SCHOOL LAW.—The primary purpose of this course is to familiarize prospective school administrators and teachers with the legal features of school organization and administration. Although some attention is given to constitutional and statutory provisions, the main emphasis is upon court decisions relating to education. Students are expected to select appropriate problems in school law for intensive study. 3.106. 9:20-10:40. 3 s.h. Mr. BOLMEIER

S267. THE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL.—This course deals with such topics as aims and values, curriculum materials, classroom procedures, lesson planning, and grade placement for science teaching in the elementary school. 10.208. 9:20-10:40. 3 s.h. Mr. REYNOLDS

Thesis research credits are offered in either term by those members of the graduate staff of Duke University who are in residence. For this seminar work either three or six semester hours of credits are given, depending upon the student's period of residence and the work accomplished. Hours are to be arranged by the students and professors concerned. Thesis seminars offered are as follows:

S300X. THESIS SEMINAR IN PUBLIC SCHOOL ADMINISTRATION.

S317X. THESIS SEMINAR IN EDUCATIONAL PSYCHOLOGY.

S334X. THESIS SEMINAR IN SECONDARY EDUCATION.

S337X. THESIS SEMINAR IN ELEMENTARY EDUCATION.

S372X. THESIS SEMINAR IN PUBLIC SCHOOL SUPERVISION.

SECOND TERM

S118. EDUCATIONAL PSYCHOLOGY: PSYCHOLOGICAL DEVELOPMENT.—This course traces the psychological development of the individual from infancy to maturity. The principal topics considered are: the interdependence of hereditary and environmental factors in development, the nature of the developmental process, the establishment of the early basic patterns of behavior, changes and conditions producing these changes throughout childhood and adolescence to maturity, and the origin and treatment of minor behavior disorders. To the degree practicable, students will observe children in typical and atypical situations as a means of securing concrete data on the problems treated in the course. Not open to students who have had Psychology 121 or 126. Prerequisite: three semester hours in psychology or educational psychology. 3.201. 7:40-9:00. 3 s.h. Mr. COLVER

S217. THE PSYCHOLOGICAL PRINCIPLES OF EDUCATION.—An advanced study of teaching, learning, and the learner. Selected problems guiding the reading of students will be discussed in class. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 3.205. 7:40-9:00. 3 s.h. Mr. WEITZ

S224. TEACHING THE SOCIAL STUDIES IN ELEMENTARY SCHOOLS.—This course will treat objectives, curriculum trends, methods, and materials in elementary-school social studies. Topics to receive emphasis include unit-planning, use of the textbook, the reading program, using community resources, audio-visual materials, dealing with controversial issues, teaching time and place concepts, and evaluation. Opportunity will be provided for teachers to work on their own school problems in the social studies. 3.201. 9:20-10:40. 3 s.h. Mr. CARTWRIGHT

S235. THE NATURE, FUNCTION AND ORGANIZATION OF THE CURRICULUM.—A study of the fundamental bases for the curriculum, how the curriculum functions in the school program, and the techniques of curriculum construction. This is one of the courses required for the Master of Education degree without thesis. Open to graduate students only. 3.201. 11:00-12:20. 3 s.h.

MR. CARTWRIGHT

S255. GUIDANCE FUNCTIONS OF THE CLASSROOM TEACHER—A consideration of the philosophy, methods and tools of guidance appropriate to the classroom teacher. This course is designed for students who do not plan to become guidance specialists, but who wish to apply the principles and techniques of guidance. Prerequisites: twelve hours in either education, or psychology, or a combination of the two. 3.205. 9:20-10:40. 3 s.h.

MR. WEITZ

For information regarding thesis seminar credits, see Term I.

NURSING EDUCATION

A DIVISION OF THE DEPARTMENT OF EDUCATION

MISS THELMA INGLES, R.N., DIRECTOR OF THE DIVISION OF
NURSING EDUCATION. HANES HOUSE

FIRST TERM

S120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. Hours to be arranged. 3 s.h.

MISSSES ZUKOWSKI, TILLEY

S129N. THE PSYCHOLOGICAL ASPECTS OF NURSING CARE.—This course is designed to help the student better understand how patients feel and why they may behave as they do. Special consideration will be given to problems such as resistance to treatment, lack of desire to get well, discouragement, and suspicion. The student may try new techniques in the Duke Hospital setting, if she so desires. 6.03. 9:20-10:40. 3 s.h.

MISS ZUKOWSKI

S136N. SEMINAR IN MEDICAL OR SURGICAL SPECIALTY.—Directed study in a medical or surgical specialty. Each student works on a problem of major interest to her—such as care of the patient with cancer or care of the patient with heart disease. Individual research in the collection of original material. 6.112. 9:20-10:40. 3 s.h.

MISS INGLES

S193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better understand their function in planning and managing a program in a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel and a more adequate teaching program for students and others. 6.03. 11:00-12:20

MISS INGLES

SECOND TERM

S84N. SOCIAL FOUNDATIONS OF NURSING EDUCATION.—A special section of Education 84, applied to Nursing Education. A survey of major historical, philosophical, and sociological factors which have affected developments in nursing and nursing education. The purpose of the course is to give the student a better understanding of the place of nursing in present day society and the responsibilities of the individual nurse toward that society. Hanes House. 7:40-9:00. 3 s.h.

MISS RAPPAPORT

S120N. NURSING EDUCATION: PROBLEMS IN NURSING CARE.—Each student works on an individual problem designed to improve the nursing care of patients. Hours to be arranged. 3 s.h.

MISSSES ZUKOWSKI, TILLEY

S193N. WARD ADMINISTRATION AND TEACHING.—This course is designed to help head nurses better understand their functions in planning and managing a program in a hospital division which will result in improved care of patients, greater satisfaction for professional and non-professional personnel and a more adequate teaching program for students and others. 6.03. July 20-August 10. 9:20-10:40 and 11:00-12:20. 3 s.h.

MISS INGLES

S195N. PERSONNEL WORK IN SCHOOLS OF NURSING.—The primary purpose of this course is to help nurses and supervisors to develop greater understanding of the principles of human behavior and greater ability to apply these principles in working with patients and others in hospital divisions and in establishing cooperative relationships with other departments of the hospital. Hanes House. 9:20-10:40. 3 s.h. MISS JACOBANSKY

ENGINEERING

PROFESSOR WALTER J. SEELEY, DEAN OF THE COLLEGE OF ENGINEERING
131 ENGINEERING BUILDING

C.E. S110. PLANE SURVEYING.—Use of instruments; transit, stadia, and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisite: trigonometry; engineering drawing desirable. (Four weeks, eight hours a day.) June 10-July 7. 47.117. 4 s.h. (See Forestry.) MR. THARP

SPECIAL NOTICE.—It is anticipated that undergraduate course offerings of common interest to students in all branches of engineering will be announced in a circular to be issued March 1, 1954. Requests for information should be addressed to the Dean of the College of Engineering or to the Director of the Summer Session, Duke University, Durham, North Carolina.

ENGLISH

PROFESSOR WILLIAM H. IRVING, CHAIRMAN—2G-5 WEST DUKE BUILDING (EAST CAMPUS);
PROFESSOR PAULL F. BAUM, DIRECTOR OF GRADUATE STUDIES—
402 LIBRARY (WEST CAMPUS)

Candidates for the Master's degree in English are expected to have had at least twelve semester hours in undergraduate courses above the Sophomore level. The Department may also require additional courses if the work of the student in his first term indicates inadequate preparation.

Master's candidates in English are required to elect S203. Those who have completed as many as twelve semester hours of graduate work should take also the bibliography course, S301, or its equivalent, at their earliest opportunity.

FIRST TERM

S1. ENGLISH COMPOSITION.—A course in the fundamentals of English Composition, oral and written, with special attention to sentence structure, syntax, common errors, etc. Frequent themes. 47.140. 9:20-10:40. 3 s.h. MR. HARWELL

S2. ENGLISH COMPOSITION.—A continuation of course S1. 47.140. 11:00-12:20. 3 s.h. MR. HARWELL

S55. REPRESENTATIVE WRITERS.—Chaucer's Prologue to *The Canterbury Tales* and at least two tales, Shakespeare's *I Henry IV* and *King Lear* and one other play, the *English Bible* (selections), Milton's *Paradise Lost* (selections) and some of the shorter poems. 10.110. 9:20-10:40. 3 s.h. MR. PATTON

S125. ENGLISH LITERATURE, 1789-1832.—The course begins with selections from the poetry of the forerunners of Romanticism. The chief emphasis is on the work of the older Romantics: Blake, Burns, Wordsworth, Coleridge, Lamb, and Hazlitt. Tests and short reports. 10.110. 11:00-12:20. 3 s.h. MR. PATTON

S151. ESSENTIALS OF PUBLIC SPEAKING.—A basic course in public speaking designed to give the student the poise and confidence necessary to think and speak freely before an audience. Particular attention is paid to the gathering and organization of materials and to oral presentation. 3.08. 11:00-12:20. 3 s.h. MISS SCHWERMANN

S203. CHAUCER.—The principal Canterbury Tales; reading and interpretation of the text. A reading report or a term paper. 49.132. 7:40-9:00. 3 s.h.

MR. KOTTLER

S231. EMERSON.—A study of Emerson's ideas as reflected in selected examples of his essays and poems. 10.215. 9:20-10:40. 3 s.h.

MR. GOHDES

S308X. SEMINAR IN AMERICAN LITERATURE.—For students writing theses in American Literature. Hours and credits to be arranged.

MR. GOHDES

SECOND TERM

S2. ENGLISH COMPOSITION.—A continuation of course S1. 2.205. 9:20-10:40. 3 s.h.

MR. LANE

S56. REPRESENTATIVE WRITERS.—Pope's *Poems* (selections), Smollett's *Humphrey Clinker*, Keats's *Poems and Letters*, Thackeray's *Vanity Fair*, Shaw's *Saint Joan* and *Caesar* and *Cleopatra*, Yeats's *Collected Poems* (selections), and a twentieth-century novel. 2.102. 7:40-9:00. 3 s.h.

MR. LANE

S131. ENGLISH LITERATURE, 1832-1900.—A study of the chief English writers of poetry, prose, and drama from Carlyle to Yeats. The major writers studied in the first semester are Carlyle, Tennyson, Browning, Macaulay, Mill, Newman, and Arnold. Collateral reading from novels of the period. Lectures, discussions, tests, and a term paper. 2.102. 9:20-10:40. 3 s.h.

MR. BEVINGTON

S134. CONTEMPORARY POETRY.—A reading course in the poetry of the twentieth century in England, Ireland, and America, beginning with Gerard Manley Hopkins and William Butler Yeats. An anthology of modern poetry is read and discussed, supplemented by the wider reading of individual poets. Informal lectures and discussions with a critical paper for the term. Open to juniors and seniors, and occasionally to sophomores by special permission. 2.105. 7:40-9:00. 3 s.h.

MRS. BEVINGTON

S137. AMERICAN LITERATURE.—A survey of American Literature from Colonial times to the present. Selections from the works of important authors are read, from Cotton Mather to Eugene O'Neill, and whole novels by Hawthorne, Melville, James, Howells, and others. The work of this course ends with the Civil War period. Lectures, tests, and a term paper. 2.105. 11:00-12:20. 3 s.h.

MR. TURNER

S215. THE ELIZABETHAN DRAMATISTS (other than Shakespeare).—Selected authors. Study of some plays, rapid reading of others. Term paper. 2.105. 1:40-3:00. 3 s.h.

MR. GILBERT

S274. AMERICAN HUMOR.—The development of the native tradition in the Down-East humorists and the humorists of the Old Southwest. Extensive reading in Mark Twain and his contemporaries, and some attention to the continuation of the tradition after Mark Twain. 2.105. 9:20-10:40. 3 s.h.

MR. TURNER

S350X. SEMINAR IN ENGLISH LITERATURE.—For students writing theses in English Literature. Hours and credits to be arranged.

MR. GILBERT

FORESTRY

PROFESSOR CLARENCE F. KORSTIAN, DEAN OF THE SCHOOL OF FORESTRY AND DIRECTOR OF GRADUATE STUDIES—308 SOCIAL SCIENCE BUILDING

Organized course work in the School of Forestry during the Summer Session is limited to plane surveying, forest surveying, tree identification, and forest mensuration which are required of all students entering upon two years of study in technical forestry leading to the degree of Master of Forestry (M.F.)

Qualified students may engage in thesis research in certain branches of forestry during the Summer Session with the approval of the instructor concerned and the Dean of the School of Forestry or of the Director of Graduate Studies in the case of work taken through the Graduate School.

C.E. S110. PLANE SURVEYING.—Use of instruments; transit, stadia, and compass surveying; determination of meridian by observation on Polaris; differential and profile leveling; setting grade stakes; calculation of bearings, latitudes, departures and areas; methods of plotting; survey and plot of portions of campus by stadia, and transit and tape; care and adjustment of instruments. Prerequisites: trigonometry; engineering drawing desirable. (Four weeks, eight hours a day.) June 10-July 7. 47.117. 4 s.h.
MR. THARP

S149. FOREST TREE IDENTIFICATION.—Field studies leading to the identification of trees and principal shrubs indigenous to the Piedmont and coastal plain forests of the Southeastern United States. (One week, eight hours a day.) July 8-July 14. 9.101. 1 s.h.
MR. HARRAR

S150. FOREST SURVEYING.—Application of plane surveying to forest problems; practice in making boundary, topographical and cover type surveys of forested tracts, using both intensive and extensive methods; forest mapping and surveying using aerial photos. Work includes use of transit, level, plane table, traverse board, topographic abney, slope tape, aneroid barometer, staff compass, and aerial photo interpretation equipment. Prerequisites: Civil Engineering, S110 Plane Surveying; Forestry S149, Forest-Tree Identification, or equivalents. (Four weeks, eight hours a day.) July 15-August 11. 10.322. 4 s.h.
MR. CHAIKEN

S151. FOREST MENSURATION.—Field studies in methods of measuring content and growth of trees and forest stands; practice in timber estimating, log scaling, use of mensurational instruments, and collection of basic data. (Four weeks, eight hours a day.) August 12-September 8. 9.101. 4 s.h.
MR. SCHUMACHER

S357. RESEARCH IN FORESTRY.—Open to students whose research programs for the M.F. or D.F. degree have been approved by the Dean of the School of Forestry and the instructor responsible for directing the research and whose programs for the A.M. or Ph.D. degree have been approved by the Director of Graduate Studies and the instructor in charge. (Credits and schedule to be arranged.) June 9-August 27. 2 to 12 s.h. (Not more than one semester hour of credit per week for full time schedule or one semester hour each two weeks for half-time schedule.) (Consult courses 301-302 in Announcement of School of Forestry for letter designation of branches of forestry in which research is to be conducted.) 10.308. STAFF

FRENCH

PROFESSOR B. R. JORDAN, CHAIRMAN OF THE DEPARTMENT OF ROMANCE LANGUAGES—
214 CARR BUILDING (EAST CAMPUS); PROFESSOR L. B. WALTON, DIRECTOR OF
GRADUATE STUDIES OF THE DEPARTMENT OF ROMANCE LANGUAGE—
LIBRARY 234-B (WEST CAMPUS)

FIRST TERM

S1. ELEMENTARY FRENCH.—June 9-June 28. 3.101. 7:40-9:00 and 11:00-12:20. 3 s.h.
MR. GRANT

S2. ELEMENTARY FRENCH.—June 29-July 17. 3.101. 7:40-9:00 and 11:00-12:20. 3 s.h.
MR. GRANT

NOTE: A student enrolled in French S2 must also attend French S1, unless French 1 has been taken during Spring Semester 1954.

S3. INTERMEDIATE FRENCH.—Standard literary texts (short story, novel, drama) are used as the basis for intensive drill on the essentials of vocabulary, idiom, and construction. Extensive oral exercises are included in the reading objective. Prerequisite: French 1-2, or two units of high school French. 2.205. 7:40-9:00. 3 s.h.
MR. CORDLE

S4. INTERMEDIATE FRENCH.—Continuation of French S3. Prerequisite: French 3 or equivalent. 2.205. 11:00-12:20. 3 s.h.
MR. DEMOREST

S51. INTRODUCTION TO FRENCH LITERATURE.—Selected texts in modern French literature (fiction and drama) are approached from the literary as well as the linguistic point of view. Throughout the course there is systematic oral practice based on topics within the reading assignments. Prerequisite: French 3-4, or equivalent. 3.108. 7:40-9:00. 3 s.h. MR. DEMOREST

S52. INTRODUCTION TO FRENCH LITERATURE.—Continuation of French S51. Prerequisite: French 51, or equivalent. 3.108. 11:00-12:20. 3 s.h. MR. CORDLE

GEOLOGY

PROFESSOR E. WILLARD BERRY, CHAIRMAN—019 SCIENCE (EAST CAMPUS)

All classes in Geology, Term I, will begin on June 22 and continue through July 17. All classes in Geology, Term II, will begin on July 21 and continue through August 14. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* on page 19 of this *Bulletin*.

FIRST TERM

S51. GENERAL GEOLOGY.—This course is designed to give a general view of the surface features of the earth, their origin, structure, and materials. Illustrative materials are studied in the laboratory. Excursions may be made to neighboring points where principles of the science are studied in the field. Lectures or recitations, 8:00-11:00 daily; laboratory 2:00-5:00, Monday through Thursday, June 22-July 17. 09 Science Building, East Campus. 4 s.h. MR. HERON

SECOND TERM

S52. GENERAL GEOLOGY.—This course is designed to give some knowledge of the chief events of the earth's history. Excursions may be made to suitable neighboring localities. Lectures or recitations, 8:00-11:00 daily; laboratory 2:00-5:00 Monday through Thursday, July 21-August 14. 09 Science Building, East Campus. 4 s.h. MR. HERON

GERMAN

PROFESSOR CLEMENT VOLLMER, CHAIRMAN—106A SOCIAL SCIENCE BUILDING (WEST CAMPUS)

FIRST TERM

S1. ELEMENTARY GERMAN.—The fundamentals of grammar and pronunciation; vocabulary drill, translation, and dictation. Emphasis upon a sound reading knowledge of the language and individual achievement. June 9 to June 28. 10.106b. 9:20-10:40 and 1:40-3:00. 3 s.h. MR. MAXWELL

S2. ELEMENTARY GERMAN.—The equivalent of the second college semester of German; intensive reading of graded material; grammar and vocabulary drill; dictation and sight translation. June 29-July 17. 10.106b. 9:20-10:40 and 1:40-3:00. 3 s.h. MR. MAXWELL

NOTE: A student enrolled in German S2 must also attend German S1, unless German 1 has been taken during Spring Semester 1954.

S3. INTERMEDIATE GERMAN.—Grammar and composition; dictation, spoken German; reading of narrative and dramatic prose. 10.106b. 7:40-9:00. 3 s.h. MR. WILSON

S4. INTERMEDIATE GERMAN.—Grammar and composition; dictation, spoken German; reading of narrative and dramatic prose. Prerequisite: German S3. 10.106b. 11:00-12:20. 3 s.h. MR. WILSON

GREEK

ASSOCIATE PROFESSOR JAMES N. TRUESDALE, CHAIRMAN—303 GRAY (WEST CAMPUS)

FIRST TERM

S121. GREEK LITERATURE: HOMER.—*Iliad and Odyssey*. The purpose of this course is to give a general survey of the life and civilization of the Greeks,

especially to those who have never studied the language but wish to become acquainted with some of the choicest portions of the literature by the use of translations. The *Iliad* and the *Odyssey* are read in translation, and the excavations and discoveries at Troy and other cities of the Aegean age are discussed.

MESSRS. TRUESDALE, ROSE

S121.1. 3.205. 7:40-9:00. 3 s.h.

S121.2. 3.106. 7:40-9:00. 3 s.h.

S122. GREEK LITERATURE: THE TRAGIC POETS.—The purpose of this course is similar to that of course S121. Many of the extant plays of Aeschylus, Sophocles, and Euripides are studied in English translations. 3.205. 9:20-10:40. 3 s.h.

MR. TRUESDALE

HEALTH AND PHYSICAL EDUCATION

E. M. CAMERON, DIRECTOR, TRINITY COLLEGE AND COLLEGE OF ENGINEERING—
109 GYMNASIUM (WEST CAMPUS)

FIRST TERM

PE S57. VOLLEYBALL-TENNIS. Gymnasium. Hours to be arranged. 1 s.h.
(M)

PE S65. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.—A study of the objectives and principles upon which physical education is based. The history of physical education is studied in order to show the changes in objectives, principles and methods, and as an aid in the interpretation of trends. Open to Sophomores, Juniors, and Seniors. Gymnasium. 9:20-10:40. 3 s.h. MR. AYCOK

PE S190. PROTECTIVE PRACTICES IN PHYSICAL EDUCATION.—Training and conditioning of athletic teams and the prevention, diagnosis, and treatment of athletic injuries. Gymnasium. 1:40-3:00. 3 s.h.

MR. MONTFORT

HISTORY

PROFESSOR CHARLES S. SYDNOR, CHAIRMAN—101 LIBRARY (WEST CAMPUS); PROFESSOR E. MALCOLM CARROLL, DIRECTOR OF GRADUATE STUDIES—
406 LIBRARY (WEST CAMPUS)

For admission to candidacy for a Master's degree in History the student must present a total of eighteen semester hours of prior work in History, of which at least six must be in American History if he plans to take his major work in that field. Before enrolling for thesis supervision, candidates for the Master's degree are required to complete at least three semester hours of seminar work and are strongly urged to enroll for this work in the second term of their attendance in the Summer Session. (See courses numbered 300 or above.)

FIRST TERM

S51. HISTORICAL BACKGROUND OF THE WORLD TODAY 1500-1871.—The central fact of the expansion of Europe underlies the content of the course. The chief themes are: the contest between liberty and authority in the modern state, changing economic theory and organization, and the problems of peace and war among the states, including the Western infiltration of Asia, Latin America, and Africa, and the rise of the United States as a world power. 2.01. 7:40-9:00. 3 s.h.

MR. HAMILTON

S63. NAVAL HISTORY AND ELEMENTARY STRATEGY.—After a review of earlier periods, attention is given to the rise of sea-power and its importance in more recent times and to naval actions, especially in the two World Wars. This course is not open to students who have N.S. 102. 2.01. 9:20-10:40. 3 s.h.

MR. ROPP

S91. THE DEVELOPMENT OF AMERICAN DEMOCRACY TO 1865.—This course is a study of trends vital to an understanding of the United States today. The main theme is the development of American democracy. Problems of foreign policy, the growth of capitalism, political practices, social behavior, and conflicting ideals are considered in relation to this main theme. 2.02. 7:40-9:00. 3 s.h.

MR. DECONDE

S122. THE FOREIGN RELATIONS OF THE UNITED STATES SINCE 1880.—This course is designed to acquaint the student with the historical development of ideas and movements that have shaped American attitudes toward the outside world and to provide an historical introduction to the formal conduct of diplomacy. 2.01. 11:00-12:20. 3 s.h. MR. DeCONDE

S245. WAR IN THE MODERN WORLD.—The course is concerned with the relations between warfare and modern political, economic, and social conditions. The work deals with Clausewitz's theories of warfare and the period from the introduction of gunpowder to 1871. 2.101. 7:40-9:00. 3 s.h. MR. ROPP

S265. THE WESTWARD MOVEMENT IN THE UNITED STATES TO 1840.—A study of the progress of settlement from the Atlantic to the Pacific Coast with especial attention to the transmission of culture, developments in transportation, the transition from agrarian to urban communities, the process of state making and the social, economic, and political effects of the westward march upon the United States as a whole. 2.02. 9:20-10:40. 3 s.h. MR. STEVENS

S301. SEMINAR IN HISTORICAL RESEARCH. 2.101. 11:00-12:20 or at an hour to be arranged. 3 s.h. MR. HAMILTON

SECOND TERM

S52. HISTORICAL BACKGROUND OF THE WORLD TODAY 1871-1940.—A continuation of History S51. 2.01. 7:40-9:00. 3 s.h. MR. FERGUSON

S92. THE DEVELOPMENT OF AMERICAN DEMOCRACY, 1865 TO THE PRESENT.—The emphasis is on the emergence of contemporary problems. 2.02. 7:40-9:00. 3 s.h. MR. WATSON

S268. THE TRANSITION FROM MEDIEVAL TO MODERN ENGLAND.—A study of the changes in English society and ideas from the time of Edward III to that of Elizabeth. (The second semester of this course.) 2.01. 11:00-12:20. 3 s.h. MR. FERGUSON

S302. SEMINAR IN HISTORICAL RESEARCH. 2.02. 9:20-10:40 or at an hour to be arranged. 3 s.h. MR. WATSON

LATIN AND ROMAN STUDIES

PROFESSOR ROBERT S. ROGERS, CHAIRMAN—204 CARR (EAST CAMPUS)

FIRST TERM

S111. ROMAN LITERATURE IN ENGLISH TRANSLATION.—Selected readings of Latin literature in English translation with emphasis on the drama, lyric poetry, and the varied contributions of Cicero to literature. 2.205. 9:20-10:40. 3 s.h. MR. ROSE

MATHEMATICS

PROFESSOR J. J. GERGEN, CHAIRMAN—134 PHYSICS BUILDING (WEST CAMPUS); PROFESSOR J. H. ROBERTS, DIRECTOR OF GRADUATE STUDIES—230 PHYSICS BUILDING (WEST CAMPUS)

The Department offers work leading toward the degrees of Master of Arts, Master of Arts in Teaching, and Doctor of Philosophy, with major in Mathematics.

It is recommended that graduate students consult with the Director of Graduate Studies concerning their programs as early as possible.

FIRST TERM

S5. COLLEGE ALGEBRA.—Advanced topics in quadratic equations, systems involving quadratics, variation, binomial theorem, progressions, inequalities, theory of equations, determinants, partial fractions, probability. This course and Mathematics 6 may be taken concurrently. Prerequisite: Mathematics 1, or one and one-half units in algebra and one unit in geometry. 49.135. 7:40-9:00. 3 s.h. MR. ELLIOTT

S6. PLANE TRIGONOMETRY.—Logarithms, right and oblique triangles, radian measure, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities and equations. Prerequisite: Must be preceded or accompanied by Mathematics 5. 49.135. 9:20-10:40. 3 s.h. Mr. DRESSEL

S52. CALCULUS II.—Integration of elementary functions, areas, solids of revolution, length of arc, surfaces of revolution, centroids, moments of inertia, pressure. Prerequisite: Mathematics 51. 49.132. 9:20-10:40. 3 s.h. Mr. ELLIOTT

S205. ALGEBRA FROM AN ADVANCED STANDPOINT.—This course is designed for teachers of secondary school mathematics. Topics considered are real and complex numbers, elementary number theory, scales of notation, Diophantine problems, continued fractions, summation of series, binomial theorem, interest and annuities. Prerequisite: Calculus. 49.138. 9:20-10:40. 3 s.h. Mr. GERGEN

S239. ADVANCED CALCULUS I.—Continuity and differentiation for functions of one and several variables, Taylor's expansion with applications, definite, improper, and infinite integrals. Prerequisite: Calculus. 49.138. 7:40-9:00. 3 s.h. Mr. DRESSEL

S389X. THESIS SEMINAR.—Supervision of individual theses in algebra, analysis and geometry. Students should consult with the Director of Graduate Studies before registering. Thesis credit only. Hours to be arranged. MESSRS. GERGEN AND DRESSEL

(Students interested in the teaching of high school mathematics are referred to Education S246, page 46 of this *Bulletin*.)

SECOND TERM

S50. PLANE ANALYTIC GEOMETRY.—Rectangular and polar coordinates, loci, straight lines, conic sections. This course and Mathematics 51 may be taken concurrently. Prerequisites: Mathematics 5 and 6. 49.135. 7:40-9:00. 3 s.h. STAFF

S51. CALCULUS I.—Differentiation of elementary functions, curve tracing, maxima and minima, motion, curvature, indeterminate forms. Prerequisite: Must be preceded or accompanied by Mathematics 50. 49.135. 9:20-10:40. 3 s.h. Mr. CARLITZ

S53. CALCULUS III.—Introduction to solid analytic geometry, partial differentiation, multiple integrals, series, introduction to differential equations. Prerequisite: Mathematics 52. 49.132. 9:20-10:40. 3 s.h. STAFF

S240. ADVANCED CALCULUS II.—Double and triple integrals, infinite series, power series, implicit functions with applications to geometry. Prerequisite: Mathematics 239 or consent of the instructor. 49.138. 7:40-9:00. 3 s.h. Mr. CARLITZ

S389X. THESIS SEMINAR.—Supervision of individual theses in algebra, analysis, and geometry. Students should consult with the Director of Graduate Studies before registering. Thesis credit only. Hours to be arranged. Mr. CARLITZ

SOLID GEOMETRY

September 6-September 16, Monday-Thursday. 49.135. 8:30-11:30. 0 s.h.

Mr. ELLIOTT

PHILOSOPHY

PROFESSOR GLENN NEGLEY, CHAIRMAN—3-I WEST DUKE BUILDING (EAST CAMPUS);

PROFESSOR CHARLES A. BAYLIS, DIRECTOR OF GRADUATE STUDIES—

3-I WEST DUKE BUILDING (EAST CAMPUS)

FIRST TERM

S49. ETHICS.—An introductory consideration of important moral problems as developed in European and American thought and culture. 3.205. 11:00-12:20. 3 s.h. Mr. PEACH

S94. HISTORY OF PHILOSOPHY: MODERN.—A study of the major philosophers of the period with special reference to the continuity of their thought. 3.108. 9:20-10:40. 3 s.h. Mr. PEACH

SECOND TERM

S48. LOGIC.—A study of the conditions of effective thinking and clear communication, and of typical sources of fallacies. Examination of the basic principles of deductive reasoning (making explicit the implications of statements) and of inductive reasoning (the formulation and testing of hypotheses on the basis of experience and experiment). Emphasis on practical illustrations and applications. 10.204. 11:00-12:20. 3 s.h. Mr. CLARK

S91. INTRODUCTION TO PHILOSOPHY.—A systematic and historical examination of the major problems of knowledge, morals, and metaphysics. 10.204. 9:20-10:40. 3 s.h. Mr. CLARK

PHYSICS

PROFESSOR WALTER M. NIELSEN, CHAIRMAN AND DIRECTOR OF GRADUATE STUDIES—
119 PHYSICS BUILDING (WEST CAMPUS)

All classes in Physics, Term I, will begin on June 15 and continue through July 17. All classes in Physics, Term II, will begin on July 21 and continue through August 20. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* on page 19 of this *Bulletin*.

FIRST TERM

S51. GENERAL PHYSICS.—This course treats the basic principle of general physics in a more quantitative manner than Physics 1-2. It is designed for Sophomores and Juniors and meets in a thorough way the physics requirements for entrance into the study of either medicine or engineering, and is well suited for the general student. A limited number of Freshmen who present physics for entrance and who have completed the required mathematics may be admitted by permission of the instructor. (Not open to students who have completed Physics 1-2). Prerequisite: Mathematics 5-6 or equivalent. Lecture and recitation daily, 8:30-9:50 and 10:10-11:30; laboratory three days per week, 1:00-4:00. 49.113. June 15-July 17. 5 s.h. Mr. CARPENTER

S353X. THESIS SEMINAR.—Students who are properly qualified may carry on research work under direction. Credits and hours to be arranged. STAFF

SECOND TERM

S52. GENERAL PHYSICS.—A continuation of Physics S51. Prerequisite: Physics S51. Lecture and recitation daily, 8:30-9:50 and 10:10-11:30; laboratory three days per week, 1:00-4:00. 49.113. July 21-August 20. 5 s.h. Mr. CARPENTER

S353X. THESIS SEMINAR.—For description, see First Term. STAFF

POLITICAL SCIENCE

PROFESSOR ROBERT S. RANKIN, CHAIRMAN—308 LIBRARY (WEST CAMPUS); PROFESSOR R. R. WILSON, DIRECTOR OF GRADUATE STUDIES—405 NEW LIBRARY TOWER (WEST CAMPUS)

FIRST TERM

S61. AMERICAN GOVERNMENT AND POLITICS.—A study of the American political system, emphasizing the organization and functioning of the national government. 10.107. 9:20-10:40. 3 s.h. Mr. ELLIS

S121. ELEMENTS OF INTERNATIONAL RELATIONS.—Analysis of the operations of international politics, of the foundations of national power, and of international organization, with emphasis upon attempted solutions of the central problem of international security. 10.107. 7:40-9:00. 3 s.h. Mr. ELLIS

S209. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES.—A study of the historical development of state and local governments, their present organization, their relation to each other and to the federal government. 10.205. 11:00-12:20. 3 s.h. Mr. HOWARD

S241. ADMINISTRATIVE MANAGEMENT.—The development of scientific management, its application to government in the United States and a consideration of current problems in organization, procedure, work simplification and management improvement. 10.205. 9:20-10:40. 3 s.h. MR. HOWARD

SECOND TERM

S62. AMERICAN GOVERNMENT AND POLITICS.—A continuation of S61. For description see Term I. 10.107. 9:20-10:40. 3 s.h. MRS. CHIEK

S191. TOPICS IN LOCAL GOVERNMENT.—Problems in the general area of county and city government including the administration of government services such as education, public welfare, law enforcement; inter-governmental relationships; administrative reorganizations; methods of popular control; and the reconstruction of state and local government so as to meet present-day needs. 10.107. 7:40-9:00. 3 s.h. MRS. CHIEK

S232. JAPANESE CIVILIZATION.—Analysis of Japanese culture with reference to social and political institutions. Buddhist, Confucian, and Shinto bases of Japanese thought are examined. 10.205. 9:20-10:40. 3 s.h. MR. BRAIBANTI

S311. SEMINAR IN FAR EASTERN POLITICS.—Open to students who have completed course 211 or its equivalent. 10.205. 11:00-12:20 or at an hour to be arranged. 3 s.h. MR. BRAIBANTI

PSYCHOLOGY

PROFESSOR ELIOT H. RODNICK, CHAIRMAN—106 BIVINS BUILDING (EAST CAMPUS)

PROFESSOR KARL ZENER, DIRECTOR OF GRADUATE STUDIES—205

PSYCHOLOGY LABORATORY BUILDING (EAST CAMPUS)

For admission to candidacy for a Master's Degree in Psychology, the student must present a total of twelve semester hours in Psychology beyond the Introductory Course, at least six semester hours of which must be taken in senior-graduate courses.

Further details concerning the program of studies in Psychology may be obtained from the Director of Graduate Studies in Psychology.

FIRST TERM

S91. INTRODUCTORY PSYCHOLOGY.—An introduction to the facts, principles, and problems of normal adult psychology through a study of psychological methods as applied to motivation, emotions, perception, sensation, thinking, memory, learning, individual differences, and personality. 2.102. 9:20-10:40. 3 s.h. MR. COLLIER

S109. INTRODUCTORY SOCIAL PSYCHOLOGY.—The influence of society on personality, public opinion, propaganda, mass behavior, social change and social movements, group differences. 3.101. 9:20-10:40. 3 s.h. Prerequisite: Psychology S91 or equivalent. MR. JONES

S211. THE PROBLEM CHILD (Also Education S211).—Study of problem behavior and adjustment in children with emphasis on the causes and treatment of conduct and neurotic disorders of the maladjusted child. Particular attention will be paid to mental hygiene principles in the handling of problem children in school and home. 2.105. 9:20-10:40. 3 s.h. MR. BORSTELMANN

S232. PSYCHOLOGY OF THE PHYSICALLY HANDICAPPED.—Survey of the psychological factors underlying adjustment to physical disabilities, with particular stress upon personality, emotional and social attributes. Selected case studies will be used to illustrate the integration of such factors in adjusting to home, school, and hospital settings. These cases will stress the psychological factors which hinder learning and retraining procedures. Discussion will center about psychological techniques to produce more effective progress in rehabilitation. 2.301. 7:40-9:00. 3 s.h. MR. GARMEZY

S303. RESEARCH.—Students who are properly qualified may carry on research work under direction. Hours to be arranged. 3 s.h. MR. RODNICK

SECOND TERM

S304. RESEARCH.—Students who are properly qualified may carry on research work under direction. Hours to be arranged. 3 s.h. Mr. ZENER

RELIGION

PROFESSOR JAMES CANNON, DEAN OF THE DIVINITY SCHOOL—110 DIVINITY SCHOOL (WEST CAMPUS); PROFESSOR H. E. MYERS, CHAIRMAN OF THE DEPARTMENT OF RELIGION—204 DIVINITY SCHOOL (WEST CAMPUS); PROFESSOR H. SHELTON SMITH, DIRECTOR OF GRADUATE STUDIES IN RELIGION—308 DIVINITY SCHOOL (WEST CAMPUS)

THE DEPARTMENT OF RELIGION

FIRST TERM

S51. THE ENGLISH BIBLE.—Survey of the contents of the historical and prophetic books of the Old Testament with particular reference to the literary, historical, and religious values. 3.106. 11:00-12:20. 3 s.h. Mr. DANIELS

S52 THE ENGLISH BIBLE.—Study of the Psalms, Wisdom Literature, and the literature of the New Testament with special attention given to the literary, historical, and religious values. 3.08. 9:20-10:40. 3 s.h. Mr. DANIELS

S101. THE SOCIAL TEACHINGS OF THE PROPHETS AND JESUS.—A study of the social teachings of the Old Testament prophets and of the social ideas of Jesus as they appear in the four gospels. Not open for credit to students who take Religion 103 or 114. 3.07. 9:20-10:40. 3 s.h. Mr. PHILLIPS

S132. THE CHRISTIAN AND CONTEMPORARY SOCIAL PROBLEMS.—A study of the relevance which Christianity has to such topics as science, marriage, the state, war, politico-economic ideas and practices, communism, and the race problem. The aim of the course will be to encourage personal evaluation and interpretation, using pertinent biblical teachings and the views of prominent contemporary writers as a basis for judgment. Students may not receive credit for both Religion 132 and 130. 3.07. 11:00-12:20. 3 s.h. Mr. PHILLIPS

SECOND TERM

S51. THE ENGLISH BIBLE.—For description see Term I. 3.08. 7:40-9:00. 3 s.h. Mr. SALES

S52. THE ENGLISH BIBLE.—For description see Term I. 3.101. 11:00-12:20. 3 s.h. Mr. WETHINGTON

S94. THE BEGINNINGS OF THE CHRISTIAN CHURCH.—A study of the development of Christianity in the first two hundred years. Special emphasis will be given to the work of Paul, the later New Testament writings, the *Apostolic Fathers*, and the early Apologists. There are no prerequisites required for this course. 3.08. 11:00-12:20. 3 s.h. Mr. SALES

S181. THE NATURE AND EARLY DEVELOPMENT OF RELIGION.—Introduction to the early history of religion, the beliefs and practices of the more primitive peoples, and the religious life of the ancient world. 3.07. 9:20-10:40. 3 s.h. Mr. WETHINGTON

THE DIVINITY SCHOOL

Courses carrying credit in the Divinity School only are numbered from 101 to 199. Courses approved for credit in both the Divinity School and the Graduate School of Arts and Sciences are numbered above 200. Students entering the Divinity School for the first time in the Summer Session of 1954 will choose courses numbered from 101 to 199.

FIRST TERM

S107 (DS). THE PERSON AND WORK OF CHRIST.—An intensive examination of classical types of Christological and soteriological formulation in the history of Christian reflection, assessment and constructive position. For Divinity School students. 3.109. 7:40-9:00. 3 s.h. Mr. CUSHMAN

S120 (DS). THE CREEDS OF CHRISTENDOM.—A historical interpretative study of great Christian creeds and confessions. For Divinity School students. 3.109. 1:40-3:00. 3 s.h. MR. SCHAFER

S192 (DS). CHRISTIANITY AND INTERNATIONAL RELATIONS.—An application of Christian Ethics to world problems. For Divinity School students. 3.109. 9:20-10:40. 3 s.h. MR. LACY

S224 (DS). CONCEPTIONS OF MAN IN WESTERN THOUGHT.—An analysis and interpretation of important types of philosophical and theological theory concerning man with a view to critical evaluation and construction. For Divinity School students and Graduate students. 3.109. 11:00-12:20. 3 s.h. MR. CUSHMAN.

SECOND TERM

S138 (DS). GREAT BOOKS IN CHRISTIAN HISTORY.—An intensive study of Augustine's *Confessions*, Thomas a Kempis' *Imitation of Christ*, Erasmus' *Complaint of Peace*, Luther's *Christian Liberty*, Calvin's *Instruction in Faith*, and Andrewes' *Private Devotions*. For Divinity School students. 3.109. 7:40-9:00. 3 s.h. MR. PETRY

S169 (DS). THEORIES OF RELIGIOUS EDUCATION.—A critical investigation of current theories of Religious Education. For Divinity School students. 3.109. 1:40-3:00. 3 s.h. MR. KALE

S301 (DS). THE RELIGIOUS THOUGHT OF POST-EXILIC JUDAISM.—A study of the development of religious ideas in post-Exilic Judaism. For Divinity School students and Graduate students. 3.109. 9:20-10:40. 3 s.h. MR. BROWNLEE

S331 (DS). THE SOCIAL MESSAGE OF THE EARLY AND MEDIEVAL CHURCH.—A study of the social teachings and contributions of the Christian church prior to the Protestant Reformation. For Divinity School students and Graduate students. 3.109. 11:00-12:20. 3 s.h. MR. PETRY

SOCIOLOGY

PROFESSOR HOWARD E. JENSEN, CHAIRMAN—215E SOCIAL SCIENCE BUILDING (WEST CAMPUS); PROFESSOR HORNELL HART, DIRECTOR OF GRADUATE STUDIES—215D SOCIAL SCIENCE BUILDING (WEST CAMPUS)

The Department of Sociology offers graduate work leading to the A.M. and Ph.D. degrees. Before undertaking advanced work in this department, a student must have completed a minimum of twelve semester hours of approved preliminary courses in the field, and twelve additional semester hours in the field or in related work. A student who is deficient in the minimum required work will be asked to take additional undergraduate courses agreed upon in conference with the Director of Graduate Studies.

Candidates for advanced degrees in Sociology usually take minor work in Psychology, Economics, Political Science, Education, History, or Religion. Detailed requirements for the minor work, and for majors in other departments who wish to present Sociology as minor work, may be obtained from the Director of Graduate Studies.

FIRST TERM

S101. GENERAL SOCIOLOGY.—An introduction to the scientific study of social life, its origin, evolution, and organization as illustrated by the study of a number of concrete social problems. 10.216. 7:40-9:00. 3 s.h. MR. ROY

(Course 91-92, or 101, or 111, or 112 is prerequisite to all other courses in the department. Course 91-92, or 101 is required of all students majoring in the department.)

S261. PROBLEMS IN INDUSTRIAL SOCIOLOGY.—Analysis of human relations problems that confront administrators of industrial institutions and leaders in industrial community life. In this course emphasis falls on the examination of concrete case materials and appraisal of published research with consideration of possibilities for further development of scientific procedures in the field of industrial sociology. 10.216. 9:20-10:40. 3 s.h. MR. ROY

S246. PUBLIC OPINION AND PROPAGANDA.—Nature and development of public opinion; relative to attitudes, biases, stereotypes and controversial issues; role of leaders, pressure groups and minority groups; use of radio, press, motion picture and graphic arts; propaganda and censorship; measurements of public opinion. 2.301. 9:20-10:40. 3 s.h. **MR. SCHETTLER**

S274. CONTEMPORARY SOCIAL PROBLEMS.—A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society; natural disasters, poverty, physical defectiveness, malnutrition, mental deficiency, mental disease, undirected leisure activities and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. Not open to students who have had Sociology 271. 10.216. 11:00-12:20. 3 s.h. **MR. SCHETTLER**

SECOND TERM

S250. MARRIAGE AND THE FAMILY.—An analysis of contemporary marriage and family experiences with emphasis on its functions, problems, resources, and values. Not open to students who have received credit for Religion 170. 10.216. 11:00-12:20. 3 s.h. **MR. HART**

S286. SOCIAL ETHICS.—A study of sociological fundamentals underlying ethics, including the controversy between materialistic and idealistic social thinkers, the nature of personalities and of social organization, the nature of social values, types of social interaction and their effects upon general social values, underlying principles and facts of social change, and the bearings of all these upon certain social problems. 10.216. 7:40-9:00. 3 s.h. **MR. HART**

SPANISH

PROFESSOR BRADY R. JORDAN, CHAIRMAN OF DEPARTMENT OF ROMANCE LANGUAGES—214 CARR BUILDING (EAST CAMPUS); PROFESSOR L. B. WALTON, DIRECTOR OF GRADUATE STUDIES OF THE DEPARTMENT OF ROMANCE LANGUAGES—LIBRARY 234-B (WEST CAMPUS); PROFESSOR GIFFORD DAVIS, DIRECTOR OF THE SCHOOL OF SPANISH STUDIES—201 GRAY (WEST CAMPUS)

FIRST TERM

S1. ELEMENTARY SPANISH.—Essentials of grammar, reading of appropriate material, drill in the spoken language. June 9-28. 2.102. 7:40-9:00 and 11:00-12:20. 3 s.h. **MR. RUBIO**

S2. ELEMENTARY SPANISH.—Continuation of S1. June 29-July 17. 2.102. 7:40-9:00 and 11:00-12:20. 3 s.h. **MR. RUBIO**

NOTE: A student enrolled in S2 must also attend S1 unless he has passed Spanish 1 in the immediate spring semester.

S3. INTERMEDIATE SPANISH.—Reading in standard literary text; review of verbs and syntax; exercises in the spoken language based on the reading text; constant use of Spanish as the medium of instruction. 2.105. 7:40-9:00. 3 s.h. **MR. AMOR Y VÁZQUEZ**

S4. INTERMEDIATE SPANISH.—Reading of modern short stories and novels, with emphasis on achievement of ability to read without translation; continued oral-aural drill; idiom study and grammar review as necessary. 2.105. 11:00-12:20. 3 s.h. **MR. TORRE**

S65. INTRODUCTION TO MODERN SPANISH LITERATURE.—Study of representative masterpieces; brief lectures in Spanish; collateral reading of critical commentaries. 2.201G. 7:40-9:00. 3 s.h. **MR. TORRE**

S68. INTRODUCTION TO SPANISH-AMERICAN LITERATURE.—Study of typical works, chiefly of the modern period; brief lectures on literary, social and cultural backgrounds and tendencies; collateral readings and reports. 2.201G. 11:00-12:20. 3 s.h. **MR. AMOR Y VÁZQUEZ**

S174. CONVERSATION AND PRONUNCIATION.—The aim of this course is two-fold: to improve the student's pronunciation and to increase his power of oral expression. The elements of Spanish phonetics will be presented in conjunction with practical exercises. Practice in oral expression will be afforded by class discussion of selected topics. 3.201. 9:20-10:40. 3 s.h. **MR. PREDMORE**

S261. NINETEENTH CENTURY SPANISH NOVEL.—A study of literary and social trends in the last half of the Nineteenth Century. 3.08. 7:40-9:00.

MR. DAVIS

S270. THE SPANISH LANGUAGE IN AMERICA.—The development of the Spanish language from the time of the Discovery to the present. 2.02. 11:00-12:20.
3 s.h.

MR. PREDMORE

ZOOLOGY

PROFESSOR I. E. GRAY, CHAIRMAN, 218 BIOLOGY; PROFESSOR K. M. WILBUR, DIRECTOR OF GRADUATE STUDIES, 327 BIOLOGY (WEST CAMPUS)

All classes in Zoology offered on Duke Campus in Term I will begin on June 22 and continue through July 17. All classes in Zoology offered at Duke Marine Laboratory at Beaufort, North Carolina, in Term I will begin on June 10 and continue through July 17. All classes in Zoology offered on Duke Campus in Term II will begin on July 21 and continue through August 14. All classes in Zoology offered at Duke Marine Laboratory, Beaufort, North Carolina, in Term II will begin on July 21 and continue through August 27. Students who wish to avoid paying a late registration fee must have their registration completed in advance of these dates. For registration dates see *General Registration* page 19 of this *Bulletin*.

For admission to candidacy for a Master's degree in Zoology, a student should have completed an undergraduate major in Zoology (courses in General Science and Botany are not counted as a part of a Zoology major). This normally amounts to about twenty-four semester hours, which should be distributed among various fields of Zoology, and must include Vertebrate Zoology or Comparative Anatomy, Physiology, and Embryology, passed with creditable grades. A candidate should also have completed at least one year of Chemistry. Work for the degree will require eighteen hours in advanced courses in Zoology, and six hours in another department for a minor, in addition to a thesis. Before registration for a degree, students should confer with the Director of Graduate Studies for the Department. Students not candidates for a degree may take courses offered if they have necessary prerequisites but may not count them toward a degree until an undergraduate major has been completed.

FIRST TERM (Duke Campus)

S1. ANIMAL BIOLOGY.—The principles of biology as applied to animals. Lecture, recitation, and laboratory daily, 8:00-12:00, 2:00-4:00. 9.120. June 22-July 17.
4 s.h.

MR. VERNBERG

S219. SPECIAL PROBLEMS.—Seniors only. Permission must be obtained in advance from the Director of Undergraduate Studies and the instructor under whose direction the student wishes to work. Hours to be arranged. 2-6 s.h.

STAFF

S353. RESEARCH.—Hours to be arranged. 2-6 s.h.

STAFF

FIRST TERM (Duke Marine Laboratory at Beaufort, North Carolina)

S203. MARINE ECOLOGY.—A study of marine animals in relation to environment. Consideration of environmental factors, succession, rhythms, communities, intraspecific and interspecific relations, productivity, conservation, problems, etc., concerned with animal life in the ocean. Lectures, reviews, conferences, field and laboratory work. 6 s.h.

MR. GRAY

S219. SPECIAL PROBLEMS. 2-6 s.h.

STAFF

S245. RADIATION BIOLOGY.—An introductory course which will deal with the basic physical, chemical, and biological principles upon which the study of the biological effects of radiation is based. It will consist of three sections: Radiation Physics, Radiation Biochemistry, and Radiation Physiology. Laboratory work using various radiation sources and a number of organisms will give an opportunity to investigate these principles at first hand. Special lecturers will include members of the staff of the Biology Division of the Oak Ridge National Laboratory. Prerequisites: Mathematics through trigonometry, college physics, inorganic and organic chemistry. 6 s.h.

MR. WILBUR

S353. RESEARCH. 2-6 s.h.

STAFF

SECOND TERM (Duke Campus)

S2. GENERAL ZOOLOGY.—A brief survey of the animal kingdom. Lecture, recitation, and laboratory daily, 8:00-12:00, 2:00-4:00. 9.120. July 21-August 14. 4 s.h.

MR. NACE

S219. SPECIAL PROBLEMS. 2-6 s.h.

STAFF

S353. RESEARCH. 2-6 s.h.

STAFF

SECOND TERM (Duke Marine Laboratory, Beaufort, North Carolina)

S219. SPECIAL PROBLEMS. 2-6 s.h.

STAFF

S274. MARINE INVERTEBRATE ZOOLOGY.—A study of invertebrate animals that occur in the Beaufort region. A number of field trips will be made to a variety of habitats to study, collect, and classify animals in their natural environments. The structure and habits of living invertebrates as well as their behavior under certain experimental conditions will be studied in the laboratory. 6 s.h.

MR. BOOKHOUT

S353. RESEARCH. 2-6 s.h.

STAFF

Alumni Organizations



GENERAL ALUMNI ASSOCIATION: The Alumni Association of Duke University is composed of the former students of Duke University and its predecessor, Trinity College. The Association gives its annual dinner at Commencement, at which time the annual business meeting of the Association is held.

GENERAL ALUMNAE ASSOCIATION: The Alumnae Association of Duke University is composed of the women graduates and former students of Duke University and its predecessor, Trinity College. The Association joins with the Alumni Association in the annual dinner at Commencement. The annual business meeting is held during Alumnae Week End.

DUKE UNIVERSITY NATIONAL COUNCIL: The Duke University National Council is a working body for the alumni interests and maintains a constant supervision of alumni activities. It devotes its activities and efforts to advancing the welfare of Duke University by all appropriate means. Two meetings are held each year, one at Commencement and the other in the fall. The Council is composed of representatives from the various classes, local associations, students, faculty, parents, representatives at large, honorary members, officers of the General Alumni and Alumnae Associations, and representatives from the alumni and alumnae organizations of the professional schools.

ALUMNAE COUNCIL: The Alumnae Council was established by the General Alumnae Association in 1925. As the working organization of the group which established it, the Council endeavors to bind more closely the alumnae and the University and to advance the interests and aims of Duke University.

THE ALUMNI OFFICE: The General Alumni Office was organized to promote the work of the local alumni and alumnae associations and to co-ordinate the various activities of the General Alumni and Alumnae Associations and the Duke University National Council and Alumnae Council. Eighty county and local alumni associations have been formed in North Carolina and other states.

THE ALUMNI REGISTER OF DUKE UNIVERSITY: *The Alumni Register* of Duke University is a magazine published ten months of the year by the Alumni Association in the interest of the alumni and the University. It aims to keep the alumni in touch with one another and with the University.

THE ALUMNI NEWS: *The Duke University Alumni News* is sent to all alumni six times during the year.

Bureau of Public Information



The Bureau of Public Information is the official news agency of the University in the Department of Public Relations, and all University news emanates from this office. The Bureau maintains the University's relationship with the press and radio, and interprets the University—its faculty, its research and achievement—to the public via these media.

The Bureau also maintains individual biographical files on all faculty members and students, as well as files on all University departments and activities. Its files of clippings form a rich source of historical information of the Institution's life. In addition, the Bureau is a source of information for the many inquiries about Duke University which are received daily from all sections of the nation and from abroad.

Gifts and Bequests



DUKE University derives its principal support from endowment funds and from miscellaneous gifts and grants. Permanently invested capital funds enable the University to offer to students academic and professional training at a fraction of its actual cost. The effectiveness of the University is determined to a large extent by its financial resources.

Gifts and bequests devoted to the improvement of the work of the University will be received and administered by the trustees in accordance with the desires of the donor.

GIFTS. Any kind of property, real or personal, may be the subject of a gift and only such form as is required to pass title is necessary. If the gift consists of real property, the title will be passed by deed; if it consists of cash or unregistered bonds, the gift is consummated by delivery of the property; or if stocks, by delivery of properly endorsed stock certificates. Unless restricted, the use of gifts is at the

discretion of the Board of Trustees. Usually the proceeds, conservatively invested, are added to the permanent endowment of the University. The donor may, however, restrict the use of any gift and designate definitely the objects for which it shall be used. In such cases, the transfer of property would be accomplished by a letter or other documents describing in detail the objects for which the proceeds of the gift are to be used and when accepted by the University the term or conditions set out therein become binding upon it.

BEQUESTS. Bequests may be made to the University by an appropriate clause inserted in a will by codicil to a will already drawn. The following forms will serve as appropriate clauses for wills or codicils:

GENERAL

I give (devise; if real property) and bequeath to Duke University, a corporation existing under the laws of the State of North Carolina and located in the City and County of Durham, State of North Carolina, and its successors forever, the sum of dollars (or otherwise describe the gift) for the general purposes and uses of the University at the discretion of the Board of Trustees.

SPECIFIC

I give (devise; if real property) and bequeath to Duke University, a corporation existing under the laws of the State of North Carolina, and located in the City and County of Durham, State of North Carolina, or its successors forever, the sum of dollars (or otherwise describe gift) and direct that the income therefrom shall be used for the following purposes, viz. (here describe the use desired).

CODICIL

Having hereinbefore made my last Will and Testament dated, and being of sound mind, I hereby make, publish, and declare the following codicil thereto; (here insert clause in same form as if it had been included in body of Will). Except as hereinbefore change, I hereby ratify, confirm and republish my said last Will and Testament.

Degrees and Honors

The following degrees were awarded June 7, 1954:

A.B. DEGREE

Cicero John Abeyounis	Nancy Jean Cannell
Charles Alexander Adams, Jr.	Carl Franklin Cannon, Jr.
John Edwin Akins	R. George Carpenter, Jr.
Lester Fisher Alexander, Jr.	Harold William Carroll
Ann Allen	Billy Reeves Cates
Betty Jean Allen	Grace Elizabeth Cathey
Irving Ellis Allen, Jr.	Vera Dorman Caviness
John Jay Allen	James Curtiss Cederstrom
Fernando Guimaraes de Almeida	Stanley Winfield Chaplin
Richard Herbert Amling	Betty Ruth Chappell
Herschel Vincent Anderson	John Norton Christie, Jr.
Martha Alice Anderson	Gordon William Clapp
Eugene Alanson Arnold, Jr.	Janice Clark
Shirley Elizabeth Arthur	Joyce Clark
Charles Edward Ashdown, Jr.	Larry Daniel Clifton
Carol Smedley Atkins	Elaine Marie Coe
William Earl Avant	Mary Elizabeth Coffee
Virginia Johnston Avery	Albert Parrott Coggeshall
Clarence Almon Bailey, Jr.	Janet Jerome Coggins
John Augustus Baima, Jr.	Harley Greenwood Collins, Jr.
Suzanne Baldwin	Patricia Ryan Collins
Bradley Sinclair Barker	George Stanley Collyer, Jr.
Lee Gordon Barnes	George Lewis Ernest Combes, Jr.
Max Lloyd Barnhardt, Jr.	Kenneth Brown Compton
Walter Irving Bates, II	Paul Blackwell Conway
Charles William Bazemore	Philip Torrence Cook
Horace Edward Beacham, Jr.	Charles H. Cooley
Margery Beane	Alice Ann Copeland
John Austin Beasley, Jr.	Anne Paschall Covington
Fred Donald Beaty	Rachel Stedman Cozart
Suzanne Joyce Beck	Theodore Robert Crawford
John Henry Bell	Janice Bland Cresap
Mary Thornton Benson	David French Crockett
Robert Benjamin Berger	Paul Calvin Cronic
Joyce Ann Bevan	Earl Pickett Crow, Jr.
Frederick Robert Biehl	Jacquelyn Culbertson
Robert Hutchins Bird	Carolyn Elizabeth Culbreth
Elizabeth Gregg Black	Jane Collier Cumming
Louise Cornelia Blackard	Charles Cunningham
Lelia Alice Blackwell	Doring Crary Dahl
Barbara Ann Blades	Barbara Joan Davis
Gerald Alston Bodden, Jr.	Jerry Donald Day
Wesley Eugene Bondurant	Keston John Deimling, Jr.
Janet Louise Bonnesen	Barbara Rose DeLapp
Joanne Lorraine Bonneville	Donald de Laski
Robert Harrison Booth	Barbara Ann Derrick
Henry Carlisle Boshamer	Kenneth Colison Derrick
Robert Stanley Botnick	Marietta Louise Deutsch
Charlotte Moore Bowers	Sharon Rae Dienstl
Dorothy Willard Bowman	Noel Patrick Dillon
Edwin Cannon Bowd	John Elliott Dixon
Benjamin Calvin Boylston	Richard Elmer Dixon
Jean Bradley	John Hull Dobbs
Robert Wallace Bradshaw, Jr.	John Willard Doebler
James Lewis Bradt	Joyce Mae Dominik
David Richard Brennan	William Leonard Donigan
Mary Lou Bridgers	Constance Alden Downs
Joy Wood Britt	Janet Marie Drake
Carolyn Westbrook Brown	Marcia Randolph Drake
Charles Shugart Brown, Jr.	Charles Grice Driesell
Edgar B. Brown	Robert William Driscoll
James P. Brown	Dorothy Ann Dudley
Joyce Brown	Davis Welby Duke, Jr.
William Franklin Bryant, Jr.	Jo Claire Crumbley Dulin
Mary Constance Bryson	Rosemary Dundas
William Blanton Burdschu	Adrienne Dussault
Barbara Anne Burrous	Audrey Louise Dutoit
Robert L. Burrows	Ruth Clarke Dutton
Ann Mapes Burton	Joseph Carter Duys
Virginia Anne Bush	David William Dwyer
John Thomas Butters, Jr.	Abigail Eades
Richard Walter Cahill	

Harold Clark Earnhardt
 James R. Eddy
 Catherine Ward Edens
 Willard Lee Edwards
 Fred Hemenway Else
 Joseph Schrum Epps
 Ronald David Ertley
 Jack Craver Evans
 Archie Blair Fairley, Jr.
 James P. Farber
 John Eugene Featherston
 John Beckett Ferguson
 George Milton Fesperman
 Francis George Fike, Jr.
 Brown Faucette Finch
 Earl Byron Finley, Jr.
 George I. Fischer, Jr.
 Judith Kendall Fischer
 Mary French Flannery
 Hazel LaRue Fogle
 Martha Caroline Forbus
 Constance Brigham Ford
 Nancy Jo Fox
 Robert Friedlander
 Gerald William Fuller
 J. Peyton Fuller
 Edwin Richard Gabler
 James Dale Galloway
 James Christopher Geoghegan
 Gerald Robert Gibbons
 Ivey Wilson Gilliam
 Jack Knight Gilliland
 Charles Elliot Glanzer
 James Fuller Glass, Jr.
 Mary Grace Godard
 Alma Norma Goldberg
 Elizabeth Ann Goode
 William Francis Goodman
 Jasper M. Gordon, Jr.
 Peter Anton Goubert
 Barbara Gould
 Thomas Caston Graham
 Truett Allen Grant
 Aurelia Elizabeth Gray
 Nancy Jean Gray
 Ray Gardner Green, Jr.
 Herman Alfred Greenglass
 Dolores Alexandra Gregory
 Barbara Ann Gresham
 Ashton Thomas Griffin, III
 William Humphrey Grigg
 James Lee Gulledege
 Robert G. Guy
 Hunter B. Hadley, Jr.
 Donald Ray Haislip
 Anne Pauline Hall
 Raymond Artie Hall, Jr.
 Robert Verne Hall
 Shirley Jean Hall
 Reginald Stanley Hamel
 William Moor Hames, Jr.
 Julie Hereford Hamilton
 Harvey Bly Hamrick
 William Pearce Hargraves, Jr.
 Barbara Anne Harris
 Mary Jane Hassinger
 Rebecca Ann Hatcher
 Margaret Anne Hawk
 Ronald Harris Hawkins
 Cynthia Gail Hege
 Charlotte Virginia Hibbler
 Caroline Moyer Hiester
 Deborah Roberson Higgins
 Joe Robert Hipp
 William Kurt Hohlstein
 Margaret Frances Holloway
 Arthur James Holmes
 William Ellsworth Holmes
 Joseph Whitsett Holt
 Aura Quinton Holton
 Robert William Honsinger
 Alfred Frank Hooker, Jr.
 Sam Terrell Hooper
 Marie de Bruyn Kops Hopkins
 Robert Bruce Horner
 Dorothy Boyd Horton
 James Courtney Horton, Jr.
 Laura Willoughby Horton
 Mary Ann Hufines
 Sara Dewey Hunt
 Richard Lewis Hunter
 Mary Alice Hurst
 Barbara Ann Ireland
 Bernard Roy Jack
 Frederic James, Jr.
 Penelope Hampton Jarrell
 Robert Leif Jensen
 Herbert Fraser Johnson
 Jean Ann Johnson
 Rebecca Ann Johnson
 Robert H. Johnson, Jr.
 Shirley Jane Johnson
 Aileen Morel Johnson
 John Devereaux Johnston, Jr.
 Leroy Orlan Johnston, Jr.
 Edwin K. Jones
 John Donald Jones, Jr.
 Nell Perkins Jones
 Sue Dolores Jones
 Thomas Dietrich Jordan
 Drayton Ray Justus, Jr.
 Diran Mgrdich Kaloostian
 Lewis Alan Kaye
 Margaret Huber Kennedy
 Jane Rachel Kerbeck
 Alice Camille Ketner
 John Washington Keziah, Jr.
 Carl Howie King, Jr.
 James Edward King
 Paula Levin Kipnis
 John Dengler Kistler
 Alice Viola Kneece
 William E. Knott
 Frances Elizabeth Kyle
 Christian Salvatore La Caruba
 Clayton Rudolph Lacy
 Robert Louis Ladehoff
 Barbara Lane
 Francine Theresa Larrinoa
 Hyer Peter Larsen, Jr.
 Robert Allen Lawler
 James David Lawrence
 Margaret Patterson Lawrence
 Donald Victor Lawson
 John Wheeler Lawther
 Robert Clark Leake
 Bayne Wesley Lefter, Jr.
 Anthony Joseph Leggio
 Warren Paul Leibfried
 Frances Knight Lennon
 David Arthur Lerps
 Charles Clyde Levergood, Jr.
 Mary Jane Lewis
 James Flint Liddon, Jr.
 James Ronald Lloyd
 Charles Burdine Looper
 Ethel Ruth Lovett
 William Sinclair Lowndes
 Charley Henry Lucas
 James Harold Lupton, Jr.
 Charles Gordon Lynn, Jr.
 Kenneth Henry MacQueen, Jr.
 William N. Maddox, Jr.
 Milo E. Magaw
 Jerome Magidoff
 Ruth Baldwin Mallette
 John William Malone
 Sara Nell Maness
 Jack Percia Mansfield
 Felix Andrew Mapleton
 Jack Henry Marks
 Harriet Berry Marlowe
 Charlie C. Mason
 Dean Towie Mason
 Randall Chaplain Mason, Jr.
 Robert Lee Matthews

Allen A. Max
 William Edward Max
 Frances Elizabeth McBride
 James Arthur McCall
 Marion Matthews McClellan, Jr.
 Gloria Mae McCollum
 Clayton Houston McCracken, Jr.
 Nancy Marion McCrary
 Anne McDonald
 Wesley Allen McGraw, Jr.
 John William McGuinn, Jr.
 Marilyn McKeeman
 Mary Duke McKelvie
 Richard E. Means
 Charles Robert Meek
 William Davis Mellin
 Noel Melville
 Garnet Ann Menges
 Shirley Williams Mersereau
 Robert Arnold Michael, Jr.
 Lawrence Michaels
 Joanne Miller
 Josephine A. Miller
 Martha Jane Miller
 Donald William Millholland
 Judith Mittleman
 Patricia Anne Moeller
 Richard Eberly Mohn
 Ellis William Moore
 Ted Lewis Moore
 George Joseph Moran, Jr.
 Jack Morton
 William Gerald Mzingo
 Philip Tillotson Murkett, Jr.
 Nancy Lou Murphy
 Charles William Murray, Jr.
 Marilyn Cissie Murray
 Edward J. Naylor
 Constance Jane Neal
 William Weaver Neal, III
 John Starr Neely, Jr.
 Harry Meade Nehrig
 Courtney B. Nelson, Jr.
 Mollie Eda Nelson
 Newell John Nessen, Jr.
 Thomas L. Nial
 Ann Rollins Norris
 Nancy Clark Northington
 Charles Frank Novak
 Thomas Allison Oakley
 Nancy Helen O'Brien
 Mildred Lytch Odom
 Jon Park O'Donnell
 Avis Ann Oehlbeck
 Patricia Marie O'Gara
 Alette Louise Olin
 William Leon Ormand
 Kenneth Bradley Orr
 Frances Ann Osborne
 Heber Burton Osborne, Jr.
 Mary Ella Otley
 Edgar Hart Owens
 Sylvia Ann Pachuta
 Nina Elizabeth Page
 Ernest Ralph Paris, Jr.
 Lelia Celeste Parker
 Paul Corwin Parker
 Arthur Vernon Patsch, Jr.
 William Henry Patty, II
 Sarah Margaret Pearce
 Fred Adams Pennington
 Alexander Sanford Keever Perlov
 Avilda Carver Peters
 John Albert Petty
 Betty McDowell Phifer
 Rose Marie Pierce
 Virginia Queen Pillow
 William Howard Pitt, Jr.
 Charles O. Pitts, Jr.
 Edward Paul Pizer
 Thomas Arnold Pope
 William Howard Pott
 Carrel Ann Power

Parham Thomas Price
 Nancy Jane Procter
 Dorothy Anne Pyles
 C. Ronald Rabin
 Robert Earl Randall
 Louis Edward Randle, Jr.
 Hilda Anthony Randolph
 Katharine Parr Ravenel
 Catherine Jane Redgrave
 Charles Kimball Redlack
 James Daniel Redwine, Jr.
 John A. Reed, Jr.
 Sarah Anne Reese
 Harry Ward Renz, Jr.
 Norma Jeanne Revels
 Charles Larry Rice
 Royce Hoston Riddick, Jr.
 Ann Monroe Rigsbee
 Julia Ann Ritch
 Martin Roaman
 Marshall Eugene Roarick
 George Donald Roberson
 Carroll M. Robinson, Jr.
 Mary Lee Robinson
 Frances Louise Rodgers
 Joanna Phyllis Romano
 Donald Ira Rosenkranz
 Graham Thurston Rowley
 William Jerome Rudge, III
 Jane Byrd Ruffin
 Franklin G. Rufty, Jr.
 Barbara Stone Russell
 Grace Wilson Sale
 Joan Natalie Salkover
 Thomas Houghton Sansom, Jr.
 Shirley Anne Schellenberg
 Marie Anne Scheller
 Robert Bernard Scheman
 Evelyn Schmitt
 Mary Raymonde Schmoeller
 Frances Elizabeth Schneidewind
 Charles William Schreiner, Jr.
 Richard T. Schwartz
 Robert Louis Schwarz
 Dorothy Elizabeth Secrest
 Mary Jane Seyffert
 Fred Alan Shabel
 Fred Whittaker Shaffer
 Frances Louvenia Sharpe
 Suzanne Sharpe
 Karl Scarborough Sheffield
 Herbert Bryan Shiftet, Jr.
 Robert Justin Short, Jr.
 William Raymond Shrader, Jr.
 Lyndon Ogburn Sikes
 Ivan Leon Siler, Jr.
 Richard Lewis Singletary
 Nancy Kathryn Skinner
 Margaret Ann Skorvaga
 Nancy Ann Sloan
 Douglas Frederick Smiley
 Bobby Wayne Smith
 Bonnie Joyce Smith
 Catherine Lorah Smith
 Charles Thomas Smith, Jr.
 Elizabeth Anne Smith
 James Wesley Smith
 Jenell Ann Smith
 Lenora Ruth Smith
 Mary Blair Smith
 Nancy Lee Smith
 Suzanne Smith
 Walter Lewis Smith
 William Jordan Joseph Smith
 Patricia Lee Sommardahl
 Donald Watson Spalding
 Sally Ann Stanback
 Richard Allen Stark
 Gary Saul Stein
 Samuel Council Stephens, Jr.
 Perry Morton Stewart
 Thomas Stewart, III
 DeLeon Edward Stokes

Donald Louis Stopp
 Mary Belle Stott
 Mary Ellen Street
 Robert Lee Sudduth, III
 Edward Preston Swecker
 Jane Carter Swing
 Nancy Ann Tatum
 Creed Bane Taylor, V
 George Richard Taylor
 Thomas Sheldon Taylor
 Alan Harrison Temple, Jr.
 Edwin R. Thomas, Jr.
 Rebekah Jane Thompson
 Larry George Thorne
 Clara Prudence Todd
 Thomas Ulland Todd
 John Alexander Tolley, III
 Elizabeth Muse Tornquist
 Elias R. Torre
 Robert Stanley Trebus
 Margit Olstad Triska
 Raymond Russell Trollinger, Jr.
 Jeanne Tisdale Trudeau
 Roger James Anderson Turner
 Richard O. Ulsh
 Richard D. Umstead
 Alfred E. Underberg
 Jane Vallentyne
 Diane Emilie Vanderhoof
 Charles Booker Vick
 Dominic Anthony Vivona
 Oliver W. Waddell
 Iona Patricia Wagoner
 Peter Nelson Waldrop
 Susan Wallace
 Ronald Gilmore Walske
 Frank S. Wamsley
 Margaret Virginia Ware

Richard Marshall Ware
 Carolyn Bettis Washburn
 Linda Jane Watkins
 Margaret Louise Watkins
 J. Kimball Watson
 Julia McCutcheon Weaver
 Betty Joyce Weedon
 Paul M. Weeks
 Thomas Wallace Weeks
 Martin Lester Weil
 Allan Tilford Welcome
 William Holt Wellons
 Charles Edward Wern, Jr.
 Joan Irving White-Spunner
 Mary Ellen Whitmore
 James Gibson Willhite
 Helen Elleda Willard
 A. Clay Williams, II
 Florence Page Wilmer
 Anne Sanders Wilson
 Barbara Mallard Wilson
 Bette Jane Wilson
 Mary Rebekah Wilson
 Norman Jay Wilson
 Ronald Earl Wingert
 John Lindsay Winstead, Jr.
 William O. Winter
 Constance Anne Wise
 Duane Ted Wolfe
 Jay Westbrook Woodard
 Barbara Anne Woods
 Barbara Ann Woodworth
 Mary Elizabeth Worsham
 Barbara A. Worthington
 William Hennes Wright
 James Randolph Wyllie
 Margaret Hunter Yancey
 Charles Curtis Yarbrough

B.S. DEGREE

Charles Robert Barr
 Charlotte Ethel Belland
 Donald Blair Chesnut
 Norman Warren Davis
 Sallie Jane Demorest
 Thomas Felder Dorn
 Meyer Garber
 Elizabeth Hicks Hart
 Sarah Frances Hart
 Robert Jay Hartsell
 Roy Ray Holt, Jr.

Robert Clarence Hope
 William Harney Jennings, Jr.
 Joseph Edward King
 Elizabeth Jean MacLehose
 James V. Mellen
 Francis Clemens Neuhaus
 Elizabeth Anne Peterson
 Charles Alan Stein
 Shinobu Togasaki
 Lee Garland Veasey, Jr.
 Harold Fuller Whitaker

B.S. DEGREE IN MEDICAL TECHNOLOGY

Joan Wilkie Collins
 Theo Tyler Hill
 Diane Elizabeth Murray
 Jane Page Prevatt
 Janice Beverly Pringle
 Joan Ripple

Norma Miller Stillwell
 Madelyn Briggs Strickland
 Jolene Guinn Sutton
 Charlotte Ruth Terhune
 Katherine Roberta ToeLaer

B.S. DEGREE IN NURSING EDUCATION

Janet Armbruster
 Jane Elizabeth Bemus
 Sylvia Caplan

Elizabeth Jane Krivicich
 Pauline Wayne McCaskill

B.S. DEGREE IN CIVIL ENGINEERING

William McGillivray Bartlett
 Raymond Hartman Baur, Jr.
 Shem Kearney Blackley, Jr.
 James Logan Cranwell, Jr.
 Charles Ellington Dickenson, Jr.
 David St. Pierre DuBose, Jr.
 Frank J. Gaidon
 George Carl Gerber
 Charles M. Hammerberg
 Roy Calvin Holland
 Raymond Earl Horton
 Gene LeRoy James
 William Curtis Landon

José Rafael Riquezes Lares
 John Wesley Montgomery, Jr.
 James Philip Murray
 Richard Louis Palatine
 Thomas Edwin Perry, II
 Kirvan Henry Pierson, Jr.
 Marshall Foster Reed, Jr.
 John Lea Sally, Jr.
 Stewart Rodgers Spelman
 Ronald Bryan Stauffer
 Stuart Hugh Vaughn
 Hubert Erwin Winkler
 Richard Tyson Wise

B.S. DEGREE IN ELECTRICAL ENGINEERING

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Philip Barry Bourne
Kendred Luter Bryant, Jr.
Leslie Foy Chesson
Daniel Thomas Collins
Jerry Vernon Cox
Lewis Thomas Fitch
Alfred Evison Kerby

W. Scott MacEwen
Robert Carl McMillan
Earl Walton Nance
Edgar Allan Poe, III
Thomas H. Proglar
John Edward Roberts
Paul Dwight Stephenson
William Carroll Yengst

B.S. DEGREE IN MECHANICAL ENGINEERING

Neil George Andon
David Sander Avera, Jr.
Raymond George Behnke
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Robert Marchant Brown
Paul Ricks Cain
Donald Amos Calleson
Gerald Charles Calleson
John Raymond Carver
Wallace James Chamberlain
John Bradford Craig, Jr.
Lee Winfield Darling
George Henry Dawson
Marvin Clement Decker
Robert Eugene Gardner
Clayton Thomas Hardon

Thomas Herbert Harmount
Joseph Henry Healey
Russell Grabs Holder, Jr.
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Lloyd Allen Liatti
Albert Vanstory Lynch
Robert Louis Mairs
George Wilmot Marsden
Guy Frederick Miller
John Howard Miller
Rodney Moore Riker, Jr.
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Robert Worth Taylor
Ronald Leonard Wilson
Richard Walker Wood

DIPLOMA IN NURSING

Josephine Betty Acton
Mary Frances Amburn
Norna Anne Barnes
Lorene Rosamond Bates
Aldath Faye Benton
Mary Christine Bessler
Betty Jean Booker
Mary Elizabeth Bovard
Dorothy Jean Bruce
Sylvia Lee Conant
Nancy Lee Duckworth
Wanda Ann Earnhardt
Ida Ruth Fleming
Martha Lillian House
Eula Elizabeth Hux
Iris Earle Jordan
Eugenia C. Justice
Elizabeth Ann Kelly
Mary Ann Kelly

Lucy Juliet Koesy
Billie Catherine Lehman
Mary Lou Lyon
Bettye Jean Martin
Jimmie Irene Matthews
Nancy Eleanore McKelvey
Carol Ogle Montgomery
Laura Ann Morrison
Jacquelin Ann Moseley
Ann Dearien Pace
Peggy Ann Reeves
Margarita Scherertz
Dorothy Annette Staub
Sallie Winegeart Tapley
Betty Jean Vaughan
Julia Morgan Wade
Jane Marie Watlington
Rebecca Ann Withers
Bettie Wilkes Wright

B.S. DEGREE IN MEDICINE

Hal Curtis Holland

Thomas Edward Morgan, Jr.

A.M. DEGREE IN TEACHING

Lloyd Gilbert Carroll
Elizabeth Hastings Heath
Mildred Mitchell Maddox

Judson Townes Mayfield, Jr.
James Earl Vann

M.R.E. DEGREE

Carol Jean Fagan

M.ED. DEGREE

Robert Willard Clark

M.F. DEGREE

Mykyta Victor Bilan
Francis Thomas Connolly
Joseph McGavock Crockett
Don Frederick Gross
Richard Kenmore Holdren
Warren Dunning Hypes
Gilbert Loyd Kelly
Peter Leonce Lorio, Jr.
James Russell McWilliam

Charles Edward Martin, II
Harry Lamar Merck
Robert Henry Rumpf
Harold Daniel Stillwell
Ralph Gray Turner
James Edgar West
Craig Darius Whitesell
Bobby Lewis Womack

A.M. DEGREE

Harold Brice Alexander
 June Northrop Barker
 Richard John Barker
 Rubin Battino
 John Bowyer Bell, Jr.
 Eugene Merle Bernstein
 Morton Brown
 Patricia Jean Carter
 Emma Gower Connor
 Christopher Julian Crowley
 Harry Schuette Dietrich, Jr.
 Esther Ann Easley
 Richard Lee Francisco
 Kathren Freeman
 Robert Dorset Graves
 Douglas Graham Hartle
 F. Wilbur Helmbold
 Stanley Hills
 Einar Hinnov
 Richard Holmes Hodgson
 David S. Hoffenberg

Winfred Jackson House
 John Howard Kepchar
 Constance Jean Mackey
 Robert William Millsbaugh
 Isaac Newell
 Arthur Marion O'Steen
 Kenneth Owen Peck, Jr.
 Pham Thi Thu
 Virginia Meade Prichard
 Charles Lloyd Reid
 Paul Schatzberg
 Adrienne Thoot Schweitzer
 Julien Carl Seibert
 Henry Charles Semmler
 Elizabeth Faye Sinclair
 Walter Herman Taylor, Jr.
 Shirley Sidney Ulmer
 Raymond Aubrey Warlick, Jr.
 Harry Wilson Wells
 Rodney Lee Wells
 Stanley Ziring

B.D. DEGREE

Daniel Edwin Bailey
 Wyman Wayne Ballentine
 Walton Needham Bass, Sr.
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 Erman Fay Bennett
 Ernest Edward Bortner, Jr.
 Edwin Charles Boulton
 Edwin Elvin Branstetter
 Wesley Gamble Brogan
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 Clarence Jack Caudill
 Richard L. Christopher
 John Holmes Christy, Jr.
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 James Rutland Crook, Jr.
 L. Guilford Daugherty
 Billy Vernon Dennis
 Clarence Harley Dickson, Jr.
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 John Francis Few
 Albert Fleet Fisher
 Frank Owen Fitzgerald, Jr.
 Ralph Lang Fleming, Jr.
 Robert Allen Foster
 Carl Gailen France
 Miriam Jolee Fritz
 James Samuel Gibbs, Jr.
 Robert Keith Glover
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 Ernest Paul Hansen
 William Thornton Hawkins
 Kenneth Weldon Howard
 Walter Edward Hudgins
 George Stephen Ingram
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Wallace Hines Kirby
 Arlie Charles Knipmeyer
 Thomas Anderson Langford, Jr.
 Arvest N. Lawson
 Homer Lefew Lemaster
 Ezra A. Luessen
 Dwight Winfred Mashburn
 James Leonard Matheson
 George Robert McKenzie, Jr.
 Raymond R. Miller
 Raymond Ledbetter Moore, II
 George E. Ogle
 Charles Edward Owens
 Robert Bruce Pate
 George Frank Plybon, Jr.
 Ernest McDowell Reagan, Jr.
 Charles Holt Richardson
 Wayne Gowan Shelton
 Early Clifford Shoaf
 Alfred Gray Stables
 H. LeRoy Stanton
 Thomas Fant Steele, Jr.
 Fletcher Wilson Swink
 Thomas Hoyle Swofford, Jr.
 Marvin D. Tyson
 Tommy Tyson
 Charles Campbell Wiggers
 Thomas McKendree Williams, Jr.
 William Earl Wilson, Jr.
 George Hoyle Winecoff
 Loy Hahn Witherspoon
 Lewis Carroll Yingling, Jr.
 Joe Bryant Young
 Hugh Claude Young, Jr.
 John Athas Zunes

LL.B. DEGREE

Eugene Moore Anderson, Jr.
 Richard Louis Baylog
 Mark Biddison
 Frank Edwin Booker
 Sidney Barclay Brooks
 Vern Daniel Calloway, Jr.
 Seymour Garland Clark, Jr.
 Marshall G. Curran, Jr.
 Robert Earl Davis
 Harold Eugene Gibson, Jr.
 Abraham Isidore Gordon
 Paul Hardin, III
 C. Anthony Harris
 Hugh W. Johnston
 William George Kaelin
 Walter Richard Kelly, Jr.
 Sanford Perry Keziah, Jr.

Everett Leo Mast
 John Wallace Maxwell
 Robert L. McFadden
 Leon Olive
 Marvin Rosenberg
 Charles Evan Rushing
 John Carl Sarazen
 Joseph Roger Shull
 Bill Lee Smith
 John Scott Street, Jr.
 Richard Joseph Stride
 John Eric Swanstrom
 Donald E. Williams
 Charles Barnette Wood
 Frazier T. Woolard, Jr.
 James Frank Young

LL.M. DEGREE

Esrone McGruder Farris, Jr.

M.D. DEGREE

Jerry Eugene Adamson
 Robert Miller Arthur
 William Glenn Aycock
 John Clifford Ayers, Jr.
 Frank Woodworth Barr, Jr.
 John Albert Barrett, Jr.
 Walter Carroll Bouzard
 Joseph Ralph Brandy, Jr.
 John Mickle Brewer, Jr.
 Charles Lee Brock
 Charles Edward Buckley, III
 Henry James Carr, Jr.
 James Edwin Clement
 Harvey Jay Cohen
 Thomas Moore Constantine
 Annabelle Thomas Craddock
 John Goodwin Craddock, Jr.
 Lamar Earle Crevasse, Jr.
 Arnold Van Osdal Davis
 George Dewey DeLaughter, Jr.
 Skottowe Wannamaker DePass
 James Francis Elliott
 Charlie Bryan Finch
 Marian Anita Floyd
 Eugene Norwood Forrester
 Louise Elaine Friend
 Kenneth George Gould, Jr.
 Gordon Harold Haiberg
 Thomas Eugene Hair, Jr.
 Wallace Weston Harvey, Jr.
 Raymond Harvey Hedge, Jr.
 William Kendall Helms, Jr.
 Wilmer Clyde Hewitt, Jr.
 Paul Edward Hill
 Alan Berle Holden
 Hal Curtis Holland
 Howard Theodore Horsley
 Donald Simon Huber
 I. Stanton Hudmon, Jr.
 Benjamin Taylor Jackson

Charles Alston James
 Norman Bert Javitt
 James David Jones
 William Burrell Jones
 James Marvin Kelley, Jr.
 Richard Alexander Kelly, Jr.
 Thomas Corwin Kenaston, Jr.
 Sheldon Losin
 Enoch Andrus Ludlow
 George Franklin Magee
 Huitt Everett Mattox, Jr.
 Joseph Loehr McGerity
 Jack Landis McGowan
 Giles Yancey Mebane
 Robert Allen Melton
 Thomas Edward Morgan, Jr.
 Ernest Gustave Newman, Jr.
 James Flemister O'Neill
 St Alexander Past, Jr.
 Robert Gray Patton
 George Herman Pierson, Jr.
 Henry Pinsker
 Clyde Randolph Potter, Jr.
 James William Ramey
 Girard Crawford Rippy, Jr.
 Leonard Milton Rothstein
 William Shapiro
 Earle Hilel Shugerman
 Robert Lloyd Sing, Jr.
 George Brook Skipworth
 Madison Stockton Spach
 Tolbert Lacy Stallings, Jr.
 William Clinton Talley
 Antone Walter Tannehill, Jr.
 Dewey Reid Tickle
 John Victor Verner, Jr.
 John Stanley Vetter
 Sidney Hovey Wanzer
 Kenneth Trotter Williams
 Robert Ben Yudel!

Olen Kenneth Campbell
 Clyde Houston Farnsworth

ED.D. DEGREE

Richard Southall Spear

Thomas Stover DeLong

D.F. DEGREE

Bratislav Zak

Edgar Hunter Wilson

J.S.D. DEGREE

PH.D. DEGREE

Philip Leighton Bayless
 Mary Evelyn Blagg
 Priscilla Dattman Bleke
 Philippe Francois Joseph Bourdeau
 Alex Edgar Brodhag, Jr.
 John Wesley Chandler
 Mary Gill Clarke
 Florapearl Armstrong Cobey
 Benjamin Theodore Cole
 William Jeffrey Coles
 David Baine Comer, III
 Jack Randolph Conrad
 Cary Coolidge
 John Thomas Cox
 Van Bogard Dunn
 Charles William Foreman
 Noel Francisco
 Glen Roy Gale
 Jay Anthony Gervasi
 John Howard Gibbons
 Walter Benson Goad, Jr.
 Flora E. Gorirossi
 Ralph Tillman Green
 John Caldwell Guilds, Jr.
 Harold Philip Hamilton
 Rupert Hester
 John Albert Hornaday, Jr.
 John McDade Howell

George Bela Kish
 Richard Hubert Knipe
 Philip Eugene Kubzansky
 Preston Hildebrand Leake
 Robert Michael Manyik
 Ronald McRae Milburn
 Richard Calvin Mockler
 Mary Frances Muldrow
 Lawrence Richard Nichols
 Pauline Wiggins O'Brien
 John Burrell Oliver
 Frank Roland Olson
 Oscar Albert Parsons
 Claude S. Phillips, Jr.
 Robert George Pohrer
 Bernard Porter
 James Brady Reece
 McMurtry Smith Richey
 Hugh Gettys Robinson
 Alan M. Rochlin
 Robert Harry Rohrer
 Howard Albert Scarrow
 Thomas Melville Stanback, Jr.
 A. Theodore Stewart, Jr.
 Richard Lee Sulzer
 Arthur S. Tamkin
 Robert Lee Taylor
 Sman Vardhanabhuti

Waldemar Melchert Walter
John Maurice Webb
Alfred John Weinheimer

Wirt Henry Wills
Paul Frederick Zweifel

HONARY DEGREES

Doctor of Laws

Charles Fisher Carroll

Doctor of Letters

Ralph Washington Sockman

COMMISSIONS IN UNITED STATES NAVY AND UNITED STATES MARINE CORPS

Ensign, United States Navy

Lee Gordon Barnes
Norman Gregory Block
Gerald Alston Bodden, Jr.
Leslie Foy Chesson
Paul Blackwell Conway
Charles H. Cooley
James Logan Cranwell, Jr.
David French Crockett
Norman Warren Davis
Charles Ellington Dickenson, Jr.
Noel Patrick Dillon
Adrienne Dussault, USNR (W)
Archie Blair Fairley, Jr.
Edwin Richard Gabler
James Christopher Geoghegan
James Lee Gulledge
William Moor Hames, Jr.
William Pearce Hargraves, Jr.
Joseph Henry Healey
Roy Calvin Holland
Frederic James, Jr.
William Harney Jennings, Jr.

Richard Jay Kastenholz
John Dengler Kistler
Lloyd Allen Liatti
Charles Gordon Lynn, Jr.
William N. Maddox, Jr.
Jerome Magidoff
John William Malone
Dennis Gilbert Marks
Noel Melville
Guy Frederick Miller
Heber Burton Osborne, Jr.
Ernest Ralph Paris, Jr.
William Henry Patty, II
Louis Edward Randle, Jr.
Charles Powell Shaw, Jr.
Robert Justin Short, Jr.
DeLeon Edward Stokes
Edwin R. Thomas, Jr.
Ronald Gilmore Walske
Allan Tilford Welcome
Richard Tyson Wise
Duane Ted Wolfe

Second Lieutenant, United States Marine Corps

Charles Robert Barr
Marvin Clement Decker
William Humphrey Grigg
David Arthur Lerps

William Howard Pitt, Jr.
Robert Earl Randall
Charles William Schreiner, Jr.

COMMISSION OF SECOND LIEUTENANT, UNITED STATES AIR FORCE

Eugene Moore Anderson, Jr.
Neil George Andon
Bradley Sinclair Barker
Max Lloyd Barnhardt, Jr.
Raymond Hartman Baur, Jr.
Robert Harrison Booth
James Lewis Bradt
Charles Shugart Brown, Jr.
John Thomas Butters, Jr.
Richard Walter Cahill
John Raymond Carver
Wallace James Chamberlain
Stanley Winfield Chaplin
George Henry Dawson
Joseph Carter Duys
Harold Clark Earnhardt
Fred Hemenway Else
James P. Farber
George Carl Gerber
Joseph T. Gilbert, Jr.
James Fuller Glass, Jr.
Peter Anton Goubert
William Kurt Hohlstein
William Ellsworth Holmes

Sam Terrell Hooper
Bernard Roy Jack
Leroy Orlan Johnston, Jr.
Thomas Dietrich Jordan
James Flint Liddon, Jr.
George Wilmot Marsden
John William McGuinn, Jr.
William Gerald Mozingo
William Weaver Neal, III
Thomas Allison Oakley
Kenneth Bradley Orr
Richard Louis Palatine
Thomas Edwin Perry, II
Farham Thomas Price
Charles Kimball Redlack
Franklin G. Ruffy, Jr.
Robert Lee Sudduth, III
Alan Harrison Temple, Jr.
Elias R. Torre
Richard Marshall Ware
Ronald Leonard Wilson
Richard Walker Wood
William Carroll Yengst

COMMISSION OF FIRST LIEUTENANT, MEDICAL CORPS, UNITED STATES ARMY
AND UNITED STATES AIR FORCE

United States Army

Walter Carroll Bouzard
James Francis Elliott
Thomas Corwin Kenaston, Jr.

Joseph Loehr McGerity
Jack Landis McGowan
George Brook Skipworth

United States Air Force

John Albert Barrett, Jr.
Kenneth George Gould, Jr.
James David Jones

William Burrell Jones
Si Alexander Past, Jr.

The following degrees were awarded September 1, 1953:

A.B. DEGREE

Harry Welling Barrick, Jr.
 George Michael Benda
 Robert Arthur Bickel
 William Warren Bishop
 William Harry Bogart
 Ralph Daniel Bornheim
 Mary Ann Bullard
 Catherine Regina Burke
 Fay Mitchell Choate
 Jonathan Yates Clark, III
 Jack Rainier Cooper
 Martin Luther Cromartie, Jr.
 Ann Woody Deyton
 Harry Ward Duff
 Mayme LaNelle Edwards
 John P. Faunce
 William McCurdy Fleming
 William Henry Geiger
 Ann-Heath Harris
 Thomas Fuller Hill, Jr.
 James Curtis Hollowell
 Ray Ronald Howell
 Milton Posie Hubbard
 Harry Elliott Inman
 Henry Allen Johnson
 Robert Woods Jones
 John Thomas King
 George Jerome Kintz
 William Paul Lea, Jr.

George Cotchett Lynch
 Clyde O. Maddox, Jr.
 James Richard McAdams
 Betty June McCoy
 Harry Jack Metropol
 Macon Patteson Miller, Jr.
 Charles Allen Norwood
 Hugo V. Olivera
 Constantine George Pantelakos
 Alice Harilee Peeler
 William Patrick Raiford, Jr.
 Monroe Duayne Rist
 William Gale Robinson
 Joseph Stone Rosenthal
 Nancy Ann Russell
 Norman Donohue Schellenger
 Joseph Ralph Seaton, Jr.
 John Frank Sharpe, Jr.
 Kirk Burr Sheirich
 William Gordon Smith, Jr.
 Helen Suzanne Spatola
 Emma Lewis Thomas
 John Robert Trulove
 August H. Wacker
 Patterson Wall
 Robert Walter Weldon
 Bruce Baxter Wills, Jr.
 Robert Wesley Younts
 Elaine Zimmerman

B.S. DEGREE

Harry Richard Allison, Jr.
 Alexander Troy Cole
 Marcelo Ariel Molina y Vedia

James Bethel Richmond
 Louise Moseley Tench

B.S. DEGREE IN NURSING EDUCATION

Olga Irene Hinderer
 Donna Marcel Homan
 Margaret Melvin
 Virginia Corinne Page

Lorraine Waters Phillips
 Katherine Estelle Tilley
 Lorraine Marie Van Horn
 Leona Lucile Weatherman

B.S. DEGREE IN CIVIL ENGINEERING

Richard Thomas Woodfield

B.S. DEGREE IN MECHANICAL ENGINEERING

Charles Carroll Brice, III
 Joseph Everett Kennedy, Jr.

Richard Newton Streeter

A.M. DEGREE IN TEACHING

Vivienne Poteat Stafford

M.ED. DEGREE

Viva Cleo Allen
 Ida Zerfing Arms
 Robert Sheerer Bishop
 Sarah Virginia Laise
 Emery E. Miller

Eddith Ruth Montgomery
 Florence Elmira Ruff
 David Kenneth Taylor Tally
 Ernest Woodrow Tufts
 Julia Catherine Weitzel

A.M. DEGREE

Pierre Aubrey
 Stanley M. Guise
 Carolyn Jones Herbert
 Dexter W. Hess
 Charles Buchanan Johnson
 Virginia Wetmore King
 Edwin Demetrius Little, Jr.

Francis William Marley
 William Andrew Moyer
 Robert John Peterson
 Patricia Jane Raff
 Charles Buck Roberts
 Milton Teichman

LL.B. DEGREE

Robert Edwin Stipe

HONORS AND PRIZES
Summa cum laude

JUNE 7, 1954

Carolyn Elizabeth Culheth
 Thomas Caston Graham
 Paul Calvin Cronce
 Charlotte Moore Bowers

John Peyton Fuller
 Donald Blair Chesnut
 Barbara Lane

SEPTEMBER 1, 1953

Alexander Troy Cole, Jr.

Magna Cum Laude

JUNE 7, 1954

Aurelia Elizabeth Gray
 Nina Elizabeth Page
 Elizabeth Muse Tornquist
 Margaret Huber Kennedy
 Margaret Ann Skorvaga
 Audrey Louise Dutoit

Margaret Louise Watkins
 Thomas Herbert Harmount
 Nancy Clark Northington
 Mary French Flannery
 Anne Paschall Covington
 Francis Clemens Neuhaus

HONORS IN DEPARTMENTS AND SCHOOLS

DEPARTMENT OF AIR SCIENCE

DISTINGUISHED MILITARY GRADUATES

Eugene Moore Anderson, Jr.
 John Hull Dobbs
 James P. Farber
 George Carl Gerber
 George Wilnot Marsden

Dean Towle Mason
 Richard Lewis Singletary
 Gilbert L. Sward
 William Carroll Yengst

SCHOOL OF LAW

Order of the Coif

Robert Earl Davis
 Paul Hardin, III

Janet Hart

Graduated "With Distinction"

Robert Earl Davis
 Esron McGruder Faris, Jr.

Paul Hardin, III

Willis Smith Prize—Paul Hardin, III

SCHOOL OF MEDICINE—Election to Alpha Omega Alpha, Honorary Medical Fraternity
 Charles Edward Buckley, III
 James Edwin Clement
 Raymond Harvey Hedge, Jr.
 Howard Theodore Horsley
 Norman Bert Javitt
 Huitt Everett Mattox, Jr.
 Thomas Edward Morgan, Jr.

Robert Gray Patton
 William Shapiro
 Madison Stockton Spach
 Dewey Reid Tickle
 John Victor Verner, Jr.
 Sidney Hovey Wanzer

SPECIAL HONORS AND PRIZES

The Robert E. Lee Prize—
 David Arthur Lerps
Anne Flexner Memorial Award in Creative Writing—
 Miki Odessa Southern
Freshman English Prize—
 Shirley Davis
 Nancy E. Rudolph
 Elizabeth Springston
 Janet E. White
Julia Dale Prize in Mathematics—
 Hugo Finol
 Bowden W. Ward, Jr.
Woman's Panhellenic Scholarship—
 Helga Schmitz-Mancy
 Shirley Held
Alice M. Baldwin Scholarship Award—
 Kathryn Plummer
 Carolyn Cather
 Sally Simmons
 Shirley Davis
 Grace Williams
 Brooke Tucker
Durham County Alumnae Scholarship—
 Sara Dula
William Senhauser Prize—
 Ralph Marshall Dark, Jr.
Erasmus Club Prize in the Humanities—
 Reynolds Price
The Milmore Prize—Kendred L. Bryant
Alpha Kappa Psi Scholarship Award—
 Richard L. Singletary
Delta Delta Delta Scholarship Award—
 Polly Price
North Carolina Association of Certified Public Accountants Award—
 J. Peyton Fuller

Phi Lambda Upsilon Award—
 Scott William Chilton
Algernon Sydney Sullivan Awards—
 Jenell Ann Smith
 Fred Donald Beaty
 Bayard Carter
The Florence Nightingale Alumnae Plaque—
 Norman Anne Barnes
Bagby Award in Pediatrics—
 Carol Ogle Montgomery (Nurse)
 Franklin Chalmers Niblock, Jr. (Intern)
The Moseley Award—
 Sylvia Lee Conant
Borden Undergraduate Research Award in Medicine—
 Thomas Edward Morgan, Jr.
 Sidney Hovey Wanzer
The Mosby Prizes—
 Robert Gray Patton
 Thomas Edward Morgan, Jr.
 Malison Stockton Spach
 John Victor Verner, Jr.
 Sidney Hovey Wanzer
Merck Award—
 Charles Edward Buckley, III
 William Shapiro
American Academy of Dental Medicine Award—
 James Marvin Kelley, Jr.
American Legion Award—
 George Brook Skipworth
R.O.T.C. Certificates of Meritorious Leadership-Achievement—
 Joseph Lochr McGerity
Sigma XI Awards—
 Undergraduate Paper—William C. Yengst
 Master's Thesis—Harry Wilson Wells
 Doctor's Thesis—Walter B. Goad, Jr.

DEGREES AND HONORS

TRINITY COLLEGE

FRESHMAN HONORS

Students listed according to average

Young, David M.
Duffey, Donald D.
Stock, Otto F.
Troy, Ballard E., Jr.
Hay, David M.
Ikenberry, Lynn D.
Paar, John A.
Dickens, Charles H.

Lavine, Daniel
McLain, Lee W., Jr.
Baker, Stephen D.
Jacobson, Samuel S.
Parks, Paul B.
Duvoisin, Peter M.
Weyhmann, Walter Victor
Havens, Harry S.

SOPHOMORE HONORS

Harrison, William T.
High, Dallas M.
Nordan, Robert W.
Mayhew, Kenneth E., Jr.
Shaw, Philip E.
Gillcrest, Thomas J.
Bower, William J.
Clark, Morris C.
Dunkin, William W.
McCollough, Newton C.
Gurley, George M.
Brubaker, Leonard H.
Robinson, Joseph D., Jr.
Fox, Alvin Benis

Harbison, James W., Jr.
Alexander, Clyde V.
White, William D., Jr.
Frederick, Willard D., Jr.
McCreery, Arley J.
Goldberg, Donald
Crutchfield, Marvin M.
Skipper, Nathan R.
Warren, James I., Jr.
Vieth, Roger G.
McKinnon, John B.
Lichtenstein, Edward
Caviness, Verne S.

JUNIOR HONORS

Porter, George H.
Postma, Herman
Winter, Thorne
Woodlief, Guy
Goff, Richard D.
Rogers, Max Gray
Chilton, Scott W.
Dickson, Ronald W.
Barnhardt, Luther
Baker, Charles
Burkholder, Peter

Clontz, John M.
Lee, James M.
Tucker, Daniel
Mowery, Alfred
Wiener, Earl
Goforth, Marcus
Gates, Herbert S.
Gray, William L.
Rackley, Charles
Cogan, Thomas J.
Shaffer, Frank L.

THE WOMAN'S COLLEGE

FRESHMAN HONORS

Brown, Tallulah Ann
Marcom, Claire Burdick
McDowell, Berma Lucretia
Roberts, Sally Louise
Urquiza, Dolores
Hart, Julia Drane
Beam, Jewel Elizabeth
Davis, Shirley Anne

Byrd, Carol
Elder, Jean Wyatt
Paulet, Yvonne Madeleine
Taylor, Claudette Stacy
Gibson, J'Nelle
Steves, Joan Louise
Cobb, Dorothy Elizabeth

SOPHOMORE HONORS

Eyster, Mary Elaine
Saunders, Nancy Elizabeth
Pfohl, Sarah Marie
Walters, Sylvia Mooneyen
Whitehurst, Barbara Anne
Davis, Sylvia Annette
Wallace, Ellen
Halyburton, Janet Anne
Clay, Florence Messick
Hopper, Caroline Guerrant
Murray, Nancy Julie

Caprio, Gioia Anne
Ray, Janet Patsy
Whinrey, Sarah Lynn
Warren, Lucy
Goldthwaite, Hathaway
Hammaker, Lydia Ellen
Hoffman, Carol Blossom
Cranston, Luanne Anita
Southern, Mattie Odessa
Watson, Cora Rebecca

JUNIOR HONORS

Robinson, Sally Dalton
Meffert, Molly Lou
Smith, Suzanne
Hoke, Carol Anne
Peksa, Janet Lee
Read, Sally Houston
McJimsey, Ann Graham
Styron, Catherine Joyce

Beckman, Marjorie Anne
Plummer, Kathryn
Newlin, Eva Joan
Adams, Virginia Jean
Corbeels, Barbara Louise
Myers, Jeanne Kathryn
Brown, Patricia Ann
Newell, Nell Bernard

COLLEGE OF ENGINEERING

FRESHMAN HONORS

Vaughan, James Willard, Jr.
Parker, Theodore Melvin

Rodgers, Edward Clarence
Beck, John Roy

SOPHOMORE HONORS

Briggs, Norman Henry
Player, Richard Lewis, Jr.
Ward, Bowden Wilson, Jr.

Little, William A.
Wilson, Robert Burns

JUNIOR HONORS

Parkerson, John B.
Hart, Norman James
DeWitt, David P.

George, Rhett Truesdale, Jr.
Huling, George, Jr.

Summary

Government, Administration, and Instruction

THE UNIVERSITY TRUSTEES	36
TRUSTEES EMERTI	2
EMERITI	24
OFFICERS OF ADMINISTRATION	67
General Administration	8
The Colleges and the Schools	31
Business Administration	17
Public Relations and Alumni Affairs	11
OFFICERS OF INSTRUCTION	627*
Professors	154
Associate Professors	100
Assistant Professors	136
Associates	43
Lecturers	13
Instructors	146
Part-time Instructors	17
Visiting Professors and Lecturers	18
OTHER OFFICERS	52†
Duke University Press	4
Legal Aid Clinic	4
Religious Life	9
Student Health	4
Music and Art	5
Physical Education, Trinity College	9
House Counselors	7
Food Services	7
The University Stores	3
THE STAFF OF THE UNIVERSITY LIBRARIES	68‡
Total	876§

* Does not include 21 officers with academic rank who are listed with the Officers of Administration.

† Does not include 19 officers with academic rank who are listed with the Officers of Instruction.

‡ Does not include 2 officers with academic rank who are listed with the Officers of Instruction.

§ Does not include duplications. An officer is included in the first category in which his name appears.

ENROLLMENT ON THE SEMESTER BASIS—1953-54

<i>School or College</i>	<i>Fall Semester 1953</i>	<i>Spring Semester 1954</i>
COLLEGE OF ENGINEERING		
Regular Students	472	422
Special Students	3
Total	472	425
TRINITY COLLEGE		
Regular Students	1,768	1,690
Special Students	29	20
Total	1,797	1,710
WOMAN'S COLLEGE		
Regular Students	1,005	959
Special Students	57	47
Total	1,062	1,006
DIVINITY SCHOOL		
Regular Students	192	195
Special Students	6	1
Total	198	196
GRADUATE SCHOOL OF ARTS AND SCIENCES		
Regular Students	323	315
Special Students	83	76
Total	406	391
SCHOOL OF FORESTRY		
Regular Students	30	31
Special Students	1	..
Total	31	31
SCHOOL OF LAW		
Regular Students	117	114
Special Students	3	2
Total	120	116
SCHOOL OF NURSING	171	166
TOTAL ENROLLED ON SEMESTER BASIS		
Regular Students	4,078	3,892
Special Students	179	149
Total	4,257	4,041

ENROLLMENT ON THE QUARTER BASIS—1953-54

Medical School	Summer Quarter 1953	Fall Quarter 1953	Winter Quarter 1954	Spring Quarter 1954
Regular Students	67	308	290	271
Fellows	16	16	29	29
Interns	46	46	56	56
Assistant Residents	86	86	86	86
Residents	10	10	10	10
Co-Residents	12	12	12	12
<u>TOTAL ENROLLED ON</u>				
<u>QUARTER BASIS</u>	237	478	483	464

MISCELLANEOUS TERMS

Course	Number of Students	Length of Term	Beginning of Term
Anesthesiology	8	12 & 18 mos.	Registration Jan. & July
Dietetics	12	12 months	Registration September
Hospital Administration	8	24 months	Appointments Jan. & July
Medical Technology	8	21 months	Registration September
Physical Therapy	12	15 months	Registration October
Record Library	6	12 months	Registration October
X-Ray Technology	6	12 months	Appointments March & Oct.

SUMMARY: FALL AND SPRING ENROLLMENT—1953-54

Fall Enrollment	4,835
Spring Enrollment	4,505

SUMMER ENROLLMENT

	Term I	Term II	July
Regular Students	1,064	651	
Mycology			8

Index



- Absences, 88
- Academic-Professional Combinations, 101
- Accounting Courses, 119
- Activities, Undergraduate Student, 185
- Administration, Officers of, 22
 - Alumni Affairs, 25
 - Business Administration, 24
 - Educational Administration, 22
 - General Administration, 22
 - Public Relations, 25
 - Summary, 438
- Admission
 - Divinity School, 264
 - Forestry School, 376
 - Graduate School, 198
 - Law School, 289
 - Medical School, 317
 - Nursing School, 343, 351, 363, 366, 370
 - Summer Session, 392
 - Undergraduate Colleges, 68
- Aesthetics Courses, 104, 215
- Air Science Courses, 111
- Alumni
 - Associations, 423
 - National Council, 423
 - Office, 423
 - Officers, 25
 - Organizations, 423
 - Publications, 423
- American History Courses, 232
- American Literature Courses, 228
- American Religious Thought Courses, 277
- American Schools of Oriental Research, 262
- Anatomy Courses, 254, 320
- Ancient Languages Courses, 136, 147, 215
- Anesthesiology, Division of, 327
- Angier Duke Regional Prizes, 74
- Anthropology Courses, 171, 249
- Application for Admission
 - Divinity School, 264
 - Forestry School, 376
 - Graduate School, 198
 - Law School, 289
 - Medical School, 317
 - Nursing School, 343, 351, 363, 366
 - Summer Session, 392
 - Undergraduate Colleges, 68
- Appointments Office, 83
- Art and Illustration, Medical, 338
- Art and Music Officers, 57
- Art Courses, 105, 215
- Assembly Meetings, 185
- Assistantships, 212, 375
- Assistants, Instructional, 55
- Athletics
 - Athletic Council, 189
 - Intercollegiate, 189
 - Participation in, 186
- Awards
 - Conferred, June, 434
 - Information on, 73
- Bachelor of Arts
 - Awarded, June, 426
 - Awarded, September, 434
 - Requirements, 91
- Bachelor of Divinity
 - Awarded, June, 431
 - Requirements, 267
- Bachelor of Laws
 - Awarded, June, 431
- Awarded, September, 434
 - Requirements, 293
- Bachelor of Science
 - Awarded, June, 429
 - Awarded, September, 434
 - Requirements, 95
- Bachelor of Science in Engineering
 - Awarded, June, 429
 - Awarded, September, 434
 - Requirements, 97
- Bachelor of Science in Medical Technology
 - Awarded, June, 429
- Bachelor of Science in Medicine
 - Awarded, June, 430
 - Requirements, 315
- Bachelor of Science in Nursing Education
 - Awarded, June, 429
 - Awarded, September, 434
 - Requirements, 100, 363
- Bacteriology Courses, 256, 322
- Bar Examinations, 291
- Bequests and Gifts, 424
- Biblical Studies Courses, 244, 273
- Biochemistry Courses, 255, 321
- Boarding Accommodations, 80
- Botany Courses, 111, 216, 402
- Broadcasting System, 191
- Bureau of Public Information, 424
- Bureau of Testing and Guidance, 83
- Business Administration Courses, 120, 221
- Business, Specialized Program in, 93
- Bylaws of the University, 11
- Calendar of the Colleges, 7
- Cancer Training Program, 331
- Candidacy for Advanced Degrees
 - Graduate School, 200, 206
 - Law School, 295, 296
 - Summer Session, 398, 400
- Charter of the University, 10
- Chemistry Courses, 114, 219, 403
- Christian Thought Courses, 246
- Church History Courses, 245, 276
- Civil Engineering
 - Courses, 177
 - Degree in, 97
- Class Meetings, 185
- Class Size
 - Graduate School, 210
 - Summer Session, 402
- Class Standing, 87
- Commissions, Military
 - AROTC, 83
 - Awarded, June, 433
 - NROTC, 83
- Composition Deficiencies, 90
- Conduct, 185, 272, 291
- Corporation, University, 19
 - Executive Committee, 19
 - University Trustees, 19, 438
- Costs
 - Divinity School, 284
 - Forestry School, 375
 - Graduate School, 212
 - Law School, 291
 - Medical School, 319
 - Nursing School, 346, 347, 367
 - Summer Session, 393
 - Undergraduate Colleges, 71
- Course Cards, 86
- Course Load

- Divinity School, 261
- Graduate School, 201
- Law School, 293
- Undergraduate Colleges, 87
- Courses of Instruction, 104, 177, 215, 262, 273, 302, 320, 353, 357, 365, 385, 402
- Accounting, 119
- Aesthetics, 104, 215
- Air Science, 111
- American History, 232
- American Literature, 129
- American Religious Thought, 277
- Anatomy, 254, 320
- Ancient Languages, 136, 147, 215
- Anthropology, 170, 249
- Art, 105, 215
- Bacteriology, 256, 322
- Biblical Studies, 244, 273
- Biochemistry, 255, 321
- Botany, 111, 216, 402
- Business Administration, 120
- Chemistry, 144, 219, 413
- Christian Thought, 246
- Church History, 245, 276
- Civil Engineering, 177
- Dentistry, 327
- Design, 106
- Drama, 129
- Economics, 116, 221, 404
- Education, 122, 223, 405
- Educational Psychology, 224
- Electrical Engineering, 179
- Elementary Education, 223
- Engineering, 177, 409
- English, 128, 227, 409
- English Literature, 129, 227
- European History, 233
- Forest Botany, 113, 218
- Forestry, 134, 229, 385, 410
- French, 166, 247, 411
- General Engineering, 183
- Geology, 134, 412
- German, 135, 231, 412
- Government, 136, 156, 239, 416
- Greek, 136, 215, 412
- Gynecology, 329
- Health, 138, 413
- Health Education, 138, 139, 141
- Hematology, 256
- Historical Theology, 276
- History, 142, 231, 413
- History of Religion and Missions, 275
- Laboratory Technique, 336
- Latin, 147, 216, 414
- Law, 302
- Mathematics, 148, 234, 414
- Mechanical Engineering, 181
- Medical Science, 150
- Medicine, 324
- Microbiology, 256, 322
- Music, 107
- Mycology, 322
- Naval Science, 150
- New Testament, 274
- Nursing, 353, 357, 365
- Nursing Education, 126, 226, 365, 366, 408
- Nutrition, 255
- Obstetrics, 329
- Old Testament, 273
- Parasitology, 256, 331
- Pastoral Care, 280
- Pathology, 323
- Pediatrics, 330
- Pharmacology, 256, 322
- Philosophy, 152, 236, 415
- Physical Education, 138, 139, 413
- Physical Therapy, 337
- Physics, 154, 237, 416
- Physiology, 256, 322
- Political Science, 156, 239, 416
- Preaching, 281
- Psychiatry, 324
- Psychology, 160, 242, 417
- Public Health, 330
- Public Law, 304
- Public School Administration, 225
- Radiology, 328
- Religion, 163, 244, 418
- Romance Languages, 66, 247, 411, 420
- Russian, 170
- Secondary Education, 225
- Semitics, 216
- Sociology, 170, 249, 419
- Spanish, 167, 248, 420
- Speech, 129, 282
- Surgery, 325
- Theology, 163, 244, 277, 418
- Toxicology, 331
- X-Ray Technology, 337
- Zoology, 174, 252, 421
- Credit
 - Graduate School, 200, 206, 210
 - Undergraduate Colleges, 87, 210
- Degrees Conferred, June
 - Bachelor of Arts, 426
 - Master of Arts, 431
 - Master of Arts in Teaching, 430
 - Bachelor of Divinity, 431
 - Bachelor of Science, 429
 - Bachelor of Laws, 431
 - Master of Laws, 431
 - Doctor of Medicine, 432
 - Master of Education, 430
 - Master of Forestry, 430
 - Master of Religious Education, 430
 - Doctor of Education, 432
 - Doctor of Forestry, 432
 - Doctor of Juridical Science, 432
 - Doctor of Philosophy, 432
 - Honorary, 433
- Degrees Conferred, September
 - Bachelor of Arts, 434
 - Master of Arts, 434
 - Master of Arts in Teaching, 434
 - Bachelor of Science, 434
 - Master of Education, 434
 - Bachelor of Laws, 434
- Degrees, Requirements for
 - Bachelor of Arts, 91
 - Bachelor of Divinity, 261
 - Bachelor of Laws, 293
 - Bachelor of Science, 95
 - Bachelor of Science in Engineering, 97
 - Bachelor of Science in Medicine, 315
 - Bachelor of Science in Nursing, 355
 - Bachelor of Science in Nursing Education, 100, 363
 - Doctor of Education, 208, 396
 - Doctor of Forestry, 381
 - Doctor of Juridical Science, 396
 - Doctor of Medicine, 316
 - Doctor of Philosophy, 205, 396
 - Master of Arts, 201, 397
 - Master of Arts in Teaching, 204, 401
 - Master of Education, 202, 366, 399
 - Master of Forestry, 379
 - Master of Laws, 295
 - Master of Religious Education, 262
- Dental School, Preparation for, 95
- Dietetics, School of, 335
- Dining Service, 80
- Diploma in Nursing
 - Awarded, June, 430
 - Requirements, 352
- Discipline, 185
- Divinity School, 259
 - Admission, 264
 - American Schools of Oriental Research, 262
 - Application for Admission, 264
 - Bachelor of Divinity, Degree, 261, 267
 - Courses, 273
 - Enrollment Statistics, 439
 - Fees, 284
 - Library, 63, 81, 261

- Living Accommodations, 284
- Master of Religious Education, 262, 270
- Preparation for, 264
- Registration, 284
- Scholarships, 262, 286
- Student Government Association, 263
- Summer Session, 283
- Divinity School Library Staff, 63
- Doctor of Education
 - Awarded, June, 432
 - Requirements, 208, 396
- Doctor of Forestry
 - Awarded, June, 432
 - Requirements, 381
- Doctor of Juridical Science
 - Awarded, June, 432
 - Requirements, 296
- Doctor of Medicine
 - Awarded, June, 432
 - Requirements, 315
- Doctor of Philosophy
 - Awarded, June, 432
 - Requirements, 205, 396
- Dormitories, 78, 79
- Drama Courses, 129
- Economics Courses, 116, 221, 404
- Educational Psychology Courses, 224
- Education Courses, 122, 223, 404
- Electrical Engineering
 - Courses, 179
 - Degree in, 97
- Elementary Education Courses, 223
- Elementary School Teaching, 95
- Emeriti, 20
- Employment, 77, 284
- Engineering
 - Courses, 177
 - Degree in, 97
 - Enrollment Statistics, 439
- English Courses, 128, 227, 409
- English Literature Courses, 129, 227
- Enrollment Statistics, 439
- European History Courses, 233
- Examinations
 - Doctoral, 206, 208, 282, 383
 - Master's, 202, 399
 - Undergraduate, 72, 88
- Executive Committee, University, 19
- Expenses
 - Divinity School, 284
 - Forestry School, 375
 - Graduate School, 212
 - Law School, 291
 - Medical School, 219
 - Nursing School, 346, 347, 367
 - Summer Session, 393
 - Undergraduate Colleges, 72
- Fees
 - Dissertation, 207
 - Divinity School, 284
 - Forestry School, 375
 - Graduate School, 212
 - Law School, 291
 - Medical School, 319
 - Nursing School, 346, 347, 367
 - Summer Session, 393
 - Undergraduate Colleges, 71, 72
- Fellowships, 212, 292, 375
- Forest Botany Courses, 113, 218
- Forest, Duke, 214
- Forestry School, 373
 - Admission, 376
 - Application for Admission, 376
 - Combination Course, 101
 - Courses, 134, 229, 385, 410
 - Doctor of Forestry Degree, 381
 - Duke Forest, 214
 - Enrollment Statistics, 439
 - Fees, 375
 - Fellowships, 375
 - Library, 81
 - Living Accommodations, 376
 - Master of Forestry Degree, 379
 - Scholarships, 375
- Founders Day, 7
- Fraternities, 192, 193
- French Courses, 166, 247, 411
- Freshman Class, Admission to, 68
- General Engineering Courses, 183
- Geology Courses, 134, 412
- German Courses, 135, 231, 412
- Gifts and Bequests, 424
- Government Courses, 136, 156, 239, 416
- Government of the University, 9
 - Bylaws, 11
 - Charter, 10
 - Indenture of Trust, 9
 - Officers, 22, 438
 - Retirement, 18
 - Sabbatical Leave, 17
- Grade Regulations
 - Divinity School, 269
 - Graduate School, 210
 - Law School, 293
 - Nursing School, 350
 - Undergraduate Colleges, 88
- Graduate and Professional Schools
 - Officers, 23
- Graduate Record Examination, 198
- Graduate School of Arts and Sciences, 197, 384, 396
 - Admission, 198
 - Application for Admission, 198
 - Assistantships, 212, 375
 - Candidacy for Advanced Degrees, 200, 206
 - Courses, 215
 - Credit, 206, 210
 - Doctor of Education Degree, 208, 396
 - Doctor of Philosophy Degree, 205, 396
 - Enrollment Statistics, 439
 - Fees, 212, 213
 - Fellowships, 212
 - Master of Arts Degree, 201, 397
 - Master of Arts in Teaching Degree, 204, 401
 - Master of Education Degree, 202, 366, 399
 - Master's Degrees, Regulations, 200
 - Oak Ridge Institute, 214
 - Preparation for, 95, 201
 - Registration, 199, 396
 - Research Facilities, 214
 - Scholarships, 212
- Greek Courses, 136, 215, 412
- Guidance, Bureau of Testing and, 83
- Gynecology Courses, 329
- Health
 - Courses, 138, 139
 - Officers, 57
- Health Education Courses, 138, 139, 141
- Hematology Courses, 256
- High School Teaching, 94
- Historical Theology Courses, 276
- History Courses, 142, 231, 413
- History of Religion and Missions Courses, 275
- History of the University, 8
- Honoraries, 192
- Honorary Degrees, 433
- Honors
 - Conferred, June, 434
 - Information on, 194
- Hospital
 - Description of, 333
 - Facilities, 311
 - Medical Care, 187, 312
- Hospital Administration, School of, 335
- Hours, Semester, 87
- House Counselors, 59
- Indenture of Trust, 9
- Instruction, Officers of, 25

- Instructional Assistant, 55, 437
- Instructional Staff, 25, 437
- Part-time Instructors, 55, 438
- Summary, 438
- Intercollegiate Athletic Program, 189
- Laboratories, 214
- Laboratory Technique Courses, 336
- Language Requirements
 - Bachelor of Arts, 91
 - Bachelor of Science, 95
 - Doctor of Forestry, 382
 - Doctor of Philosophy, 205
 - Master of Arts, 201, 397
- Latin Courses, 147, 216, 414
- Law School, 287, 323, 331
 - Admission, 289
 - Application for Admission, 289
 - Bachelor of Laws Degree, 293
 - Bar Examinations, 291
 - Candidacy for Advanced Degrees, 295, 296
 - Combination Course, 102, 290
 - Conduct, 291
 - Courses, 302
 - Doctor of Juridical Science Degree, 296
 - Enrollment Statistics, 439
 - Fees, 291
 - Fellowships, 292
 - Legal Aid Clinic, 56, 288
 - Library, 63, 81
 - Living Accommodations, 292
 - Loans, 292
 - Master of Laws Degree, 295
 - Preparation for, 95
 - Program of Instruction, 298
 - Registration, 291
 - Scholarships, 292
- Law School Library Staff, 63
- Lectures, Public, 187
- Legal Aid Clinic
 - Information on, 288
 - Staff, 56
- Libraries, Staffs, and Descriptions, 60, 81, 438
 - Departmental, 81, 214, 311
 - Divinity, 63, 81, 261
 - Engineering, 81
 - Forestry, 81
 - Law, 63, 81
 - Medical, 63, 81, 311, 338
 - University, 60, 81, 261, 311, 338
 - Woman's College, 62, 82
- Living Accommodations
 - Forestry School, 376
 - Law School, 292
 - Medical School, 319
 - Nursing School, 346, 367, 371
 - Summer Session, 393
 - Undergraduate Colleges, 78, 79
- Loan Funds, 76, 348
- Master of Arts
 - Awarded, June, 431
 - Awarded, September, 434
 - Requirements, 201, 397
- Master of Arts in Teaching
 - Awarded, June, 430
 - Awarded, September, 434
 - Requirements, 204, 401
- Master of Education
 - Awarded, June, 430
 - Awarded, September, 431
 - Requirements, 202, 366, 399
- Master of Forestry
 - Awarded, June, 430
 - Requirements, 379
- Master of Laws
 - Awarded, June, 431
 - Requirements, 295
- Master of Religious Education
 - Awarded, June, 430
 - Requirements, 270
- Mathematics Courses, 148, 234, 414
- Matriculation, 86
- Mechanical Engineering
 - Courses, 181
 - Degree in, 97
- Medals, 194
- Medical Art and Illustration Division, 338
- Medical Care, 187, 292, 312
- Medical Record Library, 338
- Medical School, 309
 - Admission, 317
 - Anesthesiology Division, 327
 - Application for Admission, 317
 - Bachelor of Science in Medicine Degree, 315
 - Cancer Training Program, 331
 - Courses, 320, 335
 - Dietetics, School of, 335
 - Doctor of Medicine, 316
 - Enrollment Statistics, 440
 - Fees, 319
 - Hospital Administration, School of, 335
 - Laboratory Technique Courses, 336
 - Library, 63, 81, 311, 338
 - Living Accommodations, 319
 - Medical Art and Illustration Division, 338
 - Medical Care, 312
 - Medical Social Service, 336
 - Nursing School, 335
 - Occupational Therapy, 338
 - Physical Therapy, 337
 - Preparation for, 95, 317, 318
 - Record Library, 338
 - Student Government, 312
 - X-Ray Technology, 337
- Medical School Library Staff, 63
- Medical Science Courses, 150
- Medical Social Service, 336
- Medicolegal Instruction, 323, 331
- Microbiology Courses, 256, 322
- Military Science, 83
- Musical Organizations, 193
- Music and Art Officers, 57
- Music Courses, 107
- Mycology Courses, 322
- National Council of Duke University, 423
- Naval Reserve Corps, 83
- Naval Science Courses, 150
- New Testament Courses, 274
- Nursing Diploma
 - Awarded, June, 430
 - Information on, 346, 352
- Nursing Education
 - Courses, 126, 226, 265, 408
 - Degree in, 100, 363
- Nursing School, 342
 - Admission, 343, 363, 366, 370
 - Application for Admission, 343
 - Bachelor of Science in Nursing, 355
 - Bachelor of Science in Nursing Education, 100, 363
 - Combination Course, 103
 - Courses, 353, 357, 365
 - Diploma, 346, 352, 353
 - Enrollment Statistics, 439
 - Fees, 346, 347, 367
 - Living Accommodations, 346, 367, 371
 - Master of Education, 366
 - Medical Program, 369
 - Nursing Education Division, 100, 126, 226, 363, 365, 366, 408
 - Operating Room Program, 370
 - Preparation for, 343
 - Psychiatric Program, 368
 - Summer Session, 348
 - Surgical Program, 369
- Nutrition Courses, 255
- Oak Ridge Institute of Nuclear Studies, 214
- Obstetrics Courses, 329
- Officers, Emeriti, 20, 437
- Officers of Administration, 22

- Alumni Affairs, 25
- Business Administration, 24
- Educational Administration, 22
- General Administration, 22
- Public Relations, 25
- Summary, 438
- Officers of Instruction, 25
- Instructional Assistants, 55, 438
- Instructional Staff, 25, 438
- Part-time Instructors, 55, 438
- Summary, 438
- Old Testament Courses, 273
- Organizations, Undergraduate Student, 191
- Orientation Program, Undergraduate, 86
- Parasitology Courses, 256, 331
- Participation in Activities, 185
- Pastoral Care Courses, 280
- Pastors' School, 263
- Pathology Courses, 323
- Pediatrics Courses, 330
- Pharmacology Courses, 256, 322
- Philosophy Courses, 152, 236, 415
- Physical Education
 - Courses, 138, 139, 413
 - Requirements, 188
 - Staff, Trinity College, 58
- Physical Therapy Courses, 337
- Physics Courses, 154, 237, 416
- Physiology Courses, 256, 322
- Political Science Courses, 156, 239, 416
- Preaching Courses, 281
- Prizes
 - Awarded, June, 434
 - Information on, 73, 194
- Psychiatry Courses, 324
- Psychology Courses, 160, 242, 417
- Publication of Dissertation, 207
- Publications
 - Alumni, 423
 - Board, 191
 - Student, 191
- Public Health Courses, 330
- Public Information, Bureau of, 424
- Public Law Courses, 304
- Public Lectures, 187
- Public Relations Officers, 25
- Public School Administration Courses, 225
- Quality Credit, 87
- Quantity Credit, 87
- Radiology Courses, 328
- Registration
 - Divinity School, 284
 - Graduate School, 199, 396
 - Law School, 291
 - Summer Session, 392
 - Undergraduate Colleges, 86
- Regulations, Academic, 87
- Religion Courses, 163, 244, 418
- Religious Life
 - Program, 186
 - Staff, 47
- Religious Work, Specialized Program in, 94
- Research, Encouragement of, 214
- Reserve Officers Training Corps, 83
 - Air Force, 83
 - Naval, 83
- Residence Requirements
 - Divinity School, 268
 - Forestry School, 381
 - Graduate School, 200, 206, 208
 - Law School, 293, 297
 - Undergraduate Colleges, 88
- Residence Staff, 59
- Retirement, 18
- Romance Languages Courses, 166, 247, 411, 420
- ROTC's, 83
 - Air Force, 83
 - Naval, 83
- Russian Courses, 170
- Sabbatical Leave, 17
- Scholarships
 - Divinity School, 262, 286
 - Forestry School, 375
 - Graduate School, 212
 - Law School, 292
 - Undergraduate Colleges, 72
- Secondary Education Courses, 225
- Semester Hours, 87
- Semiotics Courses, 216
- Size of Classes
 - Graduate School, 210
 - Summer Session, 402
- Social Functions, 187
- Social Service, 336
- Social Work, Specialized Program in, 94
- Sociology Courses, 170, 249, 419
- Sororities, 193
- Special Students, Information on, 70
- Spanish Studies
 - Courses, 167, 248, 420
 - School of, 393
- Speech Courses, 129, 282
- Student Activities Office, 190
- Student Aid, 72
- Student Government Associations
 - Divinity School, 263
 - Medical School, 312
 - Undergraduate Colleges, 191
- Student Health Officers, 57
- Summary of Officers, 438
- Summer Session, 84, 214, 283, 392
 - Admission, 392
 - Application for Admission, 392
 - Courses, 402
 - Credit, 394
 - Doctor of Education Degree, 396
 - Doctor of Philosophy Degree, 396
 - Enrollment Statistics, 440
 - Fees, 393
 - Graduate School, 396
 - Living Accommodations, 393
 - Master of Arts Degree, 397
 - Master of Arts in Teaching Degree, 401
 - Master of Education Degree, 399
 - School of Spanish Studies, 393
- Surgery Courses, 325
- Teaching, Specialized Program in, 94
- Testing and Guidance, Bureau of, 83
- Tests, Preliminary, 69
- Theology Courses, 163, 244, 277, 418
- Theses
 - Doctor of Forestry, 383
 - Doctor of Education, 209
 - Doctor of Philosophy, 207
 - Master of Arts, 201, 398
 - Master of Arts in Teaching, 204, 301
 - Master of Education, 203, 400
 - Master of Forestry, 380
- Toxicology Courses, 331
- Transcripts, 72, 210, 375
- Transfer Students
 - Graduate School, 200
 - Summer Session, 392
 - Undergraduate Colleges, 69
- Trinity College, Enrollment Statistics, 439
- Trustees, 19
- Undergraduate Colleges, General Statement, 66
- Units of Admission, 68
- University Press Staff, 56
- Woman's College, Enrollment Statistics, 439
- Woman's College Library Staff, 62
- X-Ray Technology Courses, 337
- Zoology Courses, 174, 252, 421



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